10/516837

DT12 Rec'd PCT/PTO 0 3 DEC 2004

SEQUENCE LISTING

```
<110>
        ISIS INNOVATION LIMITED
        ANDERSON, Robert Paul
        HILL, Adrian Vivian Sinton
        JEWELL, Derek Parry
<120>
        THERAPEUTIC EPITOPES AND USES THEREOF
<130>
        142769 / P035468WO
<140>
        PCT/GB03/02450
<141>
        2003-06-05
<150>
        GB 0212885.8
<151>
        2002-06-05
<160>
        758
        SeqWin99, version 1.02
<170>
<210>
<211>
<212>
        PRT
<213>
       Artificial Sequence
<220>
        peptide
<223>
<400>
        1
Pro Gln Pro Glu Leu Pro Tyr
<210>
        2
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
                5
                                    10
Ser
<210>
        3
<211>
       266
<212>
       PRT
<213>
       Homo sapiens
<400>
Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln
                5
Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Phe Pro Gly
                                25
Gln Gln Gln Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro
```

1

35 40 45

	Phe	Pro 50	Ser	Gln	Gln	Pro	Tyr 55	Leu	Gln	Leu	Gln	Pro 60	Phe	Pro	Gln	Pro
	Gln 65	Leu	Pro	Tyr	Pro	Gln 70	Pro	Gln	Ser	Phe	Pro 75	Pro	Gln	Gln	Pro	Tyr 80
	Pro	Gln	Pro	Gln	Pro 85	Gln	Tyr	Ser	Gln	Pro 90	Gln	Gln	Pro	Ile	Ser 95	Gln
	Gln	Gln	Ala	Gln 100	Gln	Gln	Gln	Gln	Gln 105	Gln	Gln	Gln	Gln	Gln 110	Gln	Gln
	Gln	Ile	Leu 115	Gln	Gln	Ile	Leu	Gln 120	Gln	Gln	Leu	Ile	Pro 125	Суз	Met	Asp
	Val	Val 130	Leu	Gln	Gln	His	Asn 135	Ile	Ala	His	Ala	Arg 140	Ser	Gln	Val	Leu
	Gln 145	Gln	Ser	Thr	Tyr	Gln 150	Leu	Leu	Gln	Glu	Leu 155	Cys	Cys	Gln	His	Leu 160
	Trp	Gln	Ile	Pro	Glu 165	Gln	Ser	Gln	Cys	Gln 170	Ala	Ile	His	Asn	Val 175	Val
	His	Ala	Ile	Ile 180	Leu	His	Gln	Gln	Gln 185	Lys	Gln	Gln	Gln	Gln 190	Pro	Ser
	Ser	Gln	Val 195	Ser	Phe	Gln	Gln	Pro 200	Leu	Gln	Gln	Tyr	Pro 205	Leu	Gly	Gln
	Gly	Ser 210	Phe	Arg	Pro	Ser	Gln 215	Gln	Asn	Pro	Gln	Ala 220	Gln	Gly	Ser	Val
	Gln 225	Pro	Gln	Gln	Leu	Pro 230	Gln	Phe	Glu	Glu	Ile 235	Arg	Asn	Leu	Ala	Leu 240
	Gln	Thr	Leu	Pro	Ala 245	Met	Cys	Asn	Val	Tyr 250	Ile	Ala	Pro	Tyr	Cys 255	Thr
	Ile	Ala	Pro	Phe 260	Gly	Ile	Phe	Gly	Thr 265	Asn						
<210> <211> <212> <213>		4 7 PRT Artificial Sequence														
<220> <223>		peptide														
<400> Pro Gln 1		4 Pro	Gln	Leu 5	Pro	Tyr										
<210> <211> <212> <213>		.> ?>	5 20 PRT Arti	lfici	lal S	Seque	ence									

```
<220>
<223>
      peptide
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro
                                    10
Gln Ser Phe Pro
            20
<210>
        6
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 6
Glu Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
                                    10
Ser
<210>
       7
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Glu
Ser
<210>
        8
<211>
        17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400>
Glu Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Glu
                                    10
Ser
<210>
        9
<211>
        5
<212>
       PRT
<213>
       Artificial Sequence
<220>
```

```
<223> peptide
<400>
Gln Pro Gln Leu Pro
<210>
       10
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       10
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Ser
<210>
       11
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Leu Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro
Gln Ser Phe Pro
           20
<210>
       12
<211>
       5
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       12
Pro Gln Leu Pro Tyr
<210>
       13
<211>
       12
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       13
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr
<210>
       14
```

```
<211>
        11
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln
        15
<210>
<211>
        14
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp
<210>
        16
<211>
       16
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Ile Asp Val Trp Leu Gly Gly Leu Leu Ala Glu Asn Phe Leu Pro Tyr
<210>
       17
<211>
       17
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
       17
Pro Gln Pro Gln Pro Phe Pro Glu Leu Pro Tyr Pro Gln Pro Gln
                5
                                    10
Ser
<210>
       18
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Phe Pro Gln Pro Gln Leu Pro Tyr Pro
```

```
1
              5
<210>
       19
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       19
Phe Pro Gln Pro Gln Pro Phe Pro
<210>
       20
<211>
       9
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       20
Pro Gln Gln Pro Gln Gln Pro Phe Pro
<210>
       21
<211>
       12
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln
<210>
       22
<211>
       12
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       22
Leu Gln Pro Glu Asn Pro Ser Gln Glu Gln Pro Glu
<210>
       23
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<220>
<222>
      1-7 and 12-17
<223> Xaa is any amino acid
```

```
<220>
<222>
        10
        Xaa is Ile, Leu, Met or Pro
<223>
<220>
<222>
        11
<223>
        Xaa is Pro, Ser or Thr
<400>
Xaa Xaa Xaa Xaa Xaa Xaa Pro Gln Xaa Xaa Xaa Xaa Xaa Xaa
                                    10
Xaa
<210>
        24
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
Val Leu Gln Gln His Asn Ile Ala His Gly Ser Ser Gln Val Leu Gln
Glu Ser Thr Tyr
            20
<210>
        25
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
        25
Ile Lys Asp Phe His Val Tyr Phe Arg Glu Ser Arg Asp Ala Leu Trp
                                    10
Lys Gly Pro Gly
            20
<210>
        26
<211>
        17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
                                    10
Pro
```

```
<210>
        27
<211>
        17
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        27
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
                                     10
Pro
<210>
        28
<211>
        17
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Ser Gln Pro Gln
Pro
<210>
        29
<211>
        17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        29
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Ser Gln Pro Gln
                                     10
Pro
<210>
        30
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Thr Tyr Pro Gln Arg Pro Gln Gln Pro Phe Pro Gln Thr Gln
                5
                                     10
                                                         15
Gln Pro Gln Gln
            20
```

```
<210>
        31
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Pro Gln Gln Pro Gln Gln Pro Gln Pro Phe Pro Gln Pro Gln Gln
                                    10
Pro Phe Pro Trp
           20
<210>
        32
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Leu Pro
Phe Pro Gln Gln
            20
<210>
        33
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Ala Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln Gln
                                    10
                                                         15
Gln Phe Pro Gln
            20
        34
<210>
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe
                                    10
Pro Gln Thr Gln
            20
```

```
<210>
       35
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 35
Pro Ile Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Gln
Gln Pro Phe Pro
           20
<210>
        36
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Pro Gln Gln Ser Phe Ser Tyr Gln Gln Gln Pro Phe Pro Gln Gln Pro
                                    10
Tyr Pro Gln Gln
<210>
        37
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<220>
<222>
<223>
       Xaa is any amino acid
<400>
        37
Gln Xaa Pro Phe
<210>
       38
<211>
       4
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<220>
<222>
       2-3
<223>
       Xaa is any amino acid
<220>
<222>
<223> Xaa is Phe or Tyr
```

```
<400>
        38
Gln Xaa Xaa Xaa
<210>
        39
<211>
        12
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400>
        39
Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Phe Pro
<210>
        40
<211>
        13
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro
<210>
        41
<211>
        12
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        41
Pro Ile Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro
                                    10
<210>
        42
<211>
       12
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        42
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln
                5
                                    10
<210>
        43
<211>
       12
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
```

```
<400> 43
Leu Gln Pro Gln Asn Pro Ser Gln Gln Pro Gln
<210>
        44
<211>
        18
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       44
Gln Gln Tyr Pro Ser Gly Gln Gly Ser Phe Gln Pro Ser Gln Gln Asn
Pro Gln
<210>
        45
<211>
        6
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<220>
<222>
<223>
       Xaa is Gln or Leu
<220>
<222>
<223>
       Xaa is Phe or Tyr
<400>
       45
Pro Gln Xaa Pro Xaa Pro
               5
<210>
       46
<211>
       12
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Leu Gln Pro Gln Asn Pro Ser Gln Gln Pro Gln
               5
                                   10
<210>
       47
<211>
       14
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       47
Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Glu Leu Pro Tyr
```

```
5
                                   10
<210>
       48
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       48
Gln Gln Leu Pro Gln Pro Glu Gln Pro Gln Gln Ser Phe Pro Glu Gln
                                   10
Glu Arg Pro Phe
           20
<210>
       49
<211>
       17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
Leu
       50
<210>
<211>
       22
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Gln Gln Pro Gln Gln Pro Pro Pro Gln Pro Gln Gln
Pro Phe Pro Trp Gln Pro
           20
<210>
       51
<211>
       17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
               5
                                   10
```

Leu

```
<210>
        52
<211>
        15
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Pro Phe Pro Trp
                                    10
<210>
        53
<211>
        12
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        53
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr
<210>
        54
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       54
Pro Phe Pro Gln Pro Gln Leu Pro Tyr
<210>
       55
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Pro Gln Leu Pro Tyr Pro Gln
<210>
       56
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400>
       56
Pro Tyr Pro Gln Pro Gln Leu Pro Tyr
```

```
<210>
       57
<211>
       11
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       57
Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln
<210>
       58
<211>
       9
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       58
Pro Gln Gln Ser Phe Pro Gln Gln
              5
<210>
       59
<211>
       8
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 59
Ile Ile Pro Gln Gln Pro Ala Gln
<210>
       60
<211>
       13
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Phe Pro Gln Gln Pro Gln Fro Tyr Pro Gln Gln Pro
<210>
       61
<211>
       12
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
Phe Ser Gln Pro Gln Gln Gln Phe Pro Gln Pro Gln
<210>
       62
```

```
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Tyr Pro
                                   10
Gln Gln Pro Gln
           20
<210>
        63
<211>
       13
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 63
Gln Ser Glu Gln Ser Gln Gln Pro Phe Pro Gln Gln Phe
<210>
       64
<211>
       9
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<220>
<222>
<223>
       Xaa is Ile or Leu
<400>
       64
Gln Xaa Pro Gln Gln Pro Gln Gln Phe
<210>
       65
<211>
       10
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 65
Pro Phe Ser Gln Gln Gln Ser Pro Phe
<210>
       66
<211>
       8
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
Pro Phe Ser Gln Gln Gln Gln
<210>
        67
<211>
        17
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Leu Gln Pro Gln
                                     10
Pro
<210>
        68
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        68
Gln Leu Gln Pro Phe Pro Arg Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Pro
<210>
        69
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
Gln Leu Gln Pro Phe Leu Gln Pro Gln Leu Pro Tyr Ser Gln Pro Gln
Pro
        70
<210>
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        70
Gln Leu Gln Pro Phe Ser Gln Pro Gln Leu Pro Tyr Ser Gln Pro Gln
                                    10
```

```
Pro
<210>
        71
<211>
        17
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       71
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Ser Tyr Ser Gln Pro Gln
                                    10
Pro
<210>
        72
<211>
        17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Pro
<210>
       73
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Leu
<210>
       74
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Pro Gln Pro Gln Pro Phe Leu Pro Gln Leu Pro Tyr Pro Gln Pro Gln
               5
                                    10
```

```
<210>
       75
<211>
       17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
       75
<400>
Pro Gln Pro Gln Pro Pro Pro Gln Leu Pro Tyr Pro Gln Pro Gln
                                   10
Ser
<210>
       76
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       76
Pro Gln Pro Gln Pro Pro Pro Gln Leu Pro Tyr Pro Gln Tyr Gln
Pro
<210>
       77
<211>
       17
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
Pro Gln Pro Gln Pro Pro Pro Gln Leu Pro Tyr Pro Gln Pro Pro
Pro
<210>
       78
<211>
       18
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu
                                   10
```

Ser

Gln Val

```
<210>
        79
<211>
        18
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400> 79
Val Pro Gln Leu Gln Pro Glu Asn Pro Ser Gln Gln Gln Pro Gln Glu
                                    10
Gln Val
<210>
        80
<211>
        18
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Val Pro Gln Leu Gln Pro Arg Asn Pro Ser Gln Gln Pro Gln Glu
                5
Gln Val
<210>
        81
<211>
        18
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Glu Gln Pro Gln Glu
                                    10
Gln Val
<210>
        82
<211>
       18
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Arg Gln Pro Gln Glu
               5
                                    10
                                                         15
Gln Val
```

```
<210>
        83
<211>
        18
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400> 83
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Glu Glu
                                    10
Gln Val
<210>
        84
<211>
        18
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        84
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Pro Arg Glu
                                    10
Gln Val
<210>
        85
<211>
        18
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Glu Gln Pro Glu Glu
                                    10
                                                        15
Gln Val
<210>
        86
<211>
        18
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
Val Pro Gln Leu Gln Pro Glu Asn Pro Ser Gln Gln Pro Glu Glu
                                    10
Gln Val
```

```
<210>
        87
<211>
        18
<212>
        PRT
        Artificial Sequence
<213>
<220>
<223>
        peptide
<400>
        87
Val Pro Gln Leu Gln Pro Glu Asn Pro Ser Gln Glu Gln Pro Gln Glu
                                    10
Gln Val
<210>
        88
<211>
        18
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Val Pro Gln Leu Gln Pro Glu Asn Pro Ser Gln Glu Gln Pro Glu Glu
Gln Val
<210>
        89
<211>
        15
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        89
Arg Trp Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln
                                    10
<210>
        90
<211>
       15
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Trp Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln
                                    10
<210>
        91
<211>
       15
<212>
       PRT
<213>
      Artificial Sequence
<220>
      peptide
<223>
```

```
Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro
                                     10
 <210>
         92
 <211>
        15
 <212>
        PRT
 <213>
        Artificial Sequence
<220>
 <223>
        peptide
 <400>
 Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln
                                     10
 <210>
        93
<211>
        15
.<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu
<210>
        94
<211>
        15
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Gln Gln
                5
                                     10
                                                          15
<210>
        95
<211>
        15
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val
                5
                                     10
                                                          15
<210>
        96
<211>
        15
<212>
        PRT
<213>
        Artificial Sequence
/<220>
<223>
       peptide
```

```
<400> 96
Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
                5
                                    10
<210>
        97
<211>
        17
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
        97
<400>
Pro Gln Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln
                                    10
Pro
<210>
        98
<211>
        19
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Leu Gly Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro
Gln Pro Phe
<210>
        99
<211>
        18
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
        99
Gln Gln Tyr Pro Ser Gly Glu Gly Ser Phe Gln Pro Ser Gln Glu Asn
Pro Gln
<210>
       100
<211>
        15
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gly Gln Gln Gly Tyr Tyr Pro Thr Ser Pro Gln Gln Ser Gly Gln
                5
```

```
<210>
       101
<211>
       17
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       101
Pro Gln Leu Pro Tyr Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
               5
Pro
<210>
       102
<211>
       14
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr
                                    10
<210>
       103
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Gln Leu Pro Gln Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln
                                                        15
                                    10
Gln Arg Pro Phe
           20
<210>
       104
<211>
       17
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       104
Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Leu Gln Pro Gln
                                    10
Ser
<210>
      105
<211>
      17
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 105
Gln Pro Gln Pro Pro Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln
                                 10
Pro
<210>
      106
<211>
      17
<212>
      PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 106
Pro Gln Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln
                                  10
Ser
      107
<210>
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 107
Ala Val Arg Phe Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
Gln Leu Pro Gln
           20
      108
<210>
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
      108
Met Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
               5
                                  10
                                                     15
Gln Gln Pro Gln
           20
<210>
      109
<211>
     20
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 109
Met Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
                                    10
Gln His Pro Gln
           20
<210>
        110
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       110
Met Val Arg Val Pro Met Pro Gln Leu Gln Pro Gln Asp Pro Ser Gln
Gln Gln Pro Gln
           20
<210>
       111
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       111
Met Val Arg Val Thr Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
Gln Gln Pro Gln
           20
<210>
       112
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       112
Ala Val Arg Val Ser Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
                                    10
Gln Gln Pro Gln
           20
<210>
       113
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 113
Ala Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
                                  10
Gln Gln Pro Gln
          20
<210>
       114
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Ala Val Arg Trp Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln
                                  10
Gln Gln Pro Gln
<210>
       115
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 115
Ala Val Arg Val Pro Val Pro Gln Leu Gln Leu Gln Asn Pro Ser Gln
Gln Gln Pro Gln
          20
<210>
      116
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400>
       116
Met Val Arg Val Pro Val Pro Gln Leu Gln Leu Gln Asn Pro Ser Gln
                                 10
                                                      15
               5
Gln Gln Pro Gln
           20
<210>
       117
<211>
       20
<212>
      PRT
      Artificial Sequence
<220>
<223> peptide
```

```
Ala Val Arg Val Pro Val Pro Gln Pro Gln Pro Gln Asn Pro Ser Gln
                                    10
Pro Gln Pro Gln
           20
<210>
        118
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        118
Ala Val Arg Val Pro Val Pro Gln Leu Gln Pro Lys Asn Pro Ser Gln
Gln Gln Pro Gln
           20
<210>
        119
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        119
Leu Gln Pro Gln Asn Pro Ser Gln Gln Leu Pro Gln Glu Gln Val Pro
                                    10
Leu Val Gln Gln
           20
<210>
        120
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
        120
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
                5
                                    10
Leu Val Gln Gln
           20
<210>
        121
<211>
        20
<212>
<213>
      Artificial Sequence
<220>
<223>
      peptide
```

```
Leu Gln Pro Gln Asn Pro Ser Gln Gln His Pro Gln Glu Gln Val Pro
                                  10
Leu Val Gln Gln
        20
<210>
       122
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 122
Leu Gln Pro Gln Asp Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
                                  10
Leu Val Gln Gln
           20
<210>
       123
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Lys Gln Val Pro
Leu Val Gln Gln
<210>
      124
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 124
Leu Gln Leu Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
Leu Val Gln Glu
        20
<210>
      125
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
```

```
<400> 125
Leu Gln Leu Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
Leu Val Gln Glu
           20
<210>
       126
<211>
       20
<212>
      PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 126
Pro Gln Pro Gln Asn Pro Ser Gln Pro Gln Pro Gln Gly Gln Val Pro
                                   10
Leu Val Gln Gln
           20
<210>
       127
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 127
Pro Gln Pro Gln Asn Pro Ser Gln Pro Gln Pro Gln Arg Gln Val Pro
Leu Val Gln Gln
           20
<210>
       128
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       128
Leu Gln Pro Lys Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
                                   10
                                                        15
Leu Val Gln Gln
           20
<210>
       129
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       129
```

```
Leu Gln Pro Gln Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro
                                    10
Leu Met Gln Gln
           20
<210>
        130
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        130
Gln Leu Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Phe Leu
                                    10
Gly Gln Gln Gln
            20
<210>
        131
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln His Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Gln Phe Leu
Gly Gln Gln Gln
            20
<210>
       132
<211>
        20
       PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        132
Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Gln Phe Leu
                                    10
Gly Gln Gln Gln
            20
<210>
       133
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        133
Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Gln Phe Leu
```

```
15
                                   10
 1
 Gly Gln Gln Gln
           20
 <210>
        134
 <211>
         20
 <212>
         PRT
 <213>
        Artificial Sequence
 <220>
 <223> peptide
 <400> 134
 Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Gln Phe Pro
                                   10
 Gly Gln Gln Gln
 <210>
        135
 <211>
        20
 <212>
        PRT
 <213> Artificial Sequence
 <220>
 <223>
       peptide
 <400>
 Gln Gln Pro Gln Lys Gln Val Pro Leu Val Gln Gln Gln Phe Pro
 Gly Gln Gln Gln
           20
 <210>
        136
        20
 <211>
 <212>
        PRT
 <213>
       Artificial Sequence
 <220>
 <223> peptide
 <400>
        136
 Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Glu Gln Gln Phe Gln
 Gly Gln Gln Gln
           20
 <210>
        137
 <211>
        20
` <212>
       PRT
 <213> Artificial Sequence
 <220>
 <223>
       peptide
 <400> 137
 Pro Gln Pro Gln Gly Gln Val Pro Leu Val Gln Gln Gln Phe Pro
```

```
Gly Gln Gln Gln
           20
<210>
       138
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       138
Pro Gln Pro Gln Arg Gln Val Pro Leu Val Gln Gln Gln Phe Pro
Gly Gln Gln Gln
           20
<210>
       139
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
       139
Gln Gln Pro Gln Glu Gln Val Pro Leu Met Gln Gln Gln Gln Phe
                                   10
Pro Gly Gln Gln
           20
<210>
       140
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 140
Leu Val Gln Gln Gln Phe Leu Gly Gln Gln Pro Phe Pro Pro
                                   10
Gln Gln Pro Tyr
           20
<210>
       141
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
      peptide
<223>
<400>
       141
Leu Val Gln Gln Gln Gln Phe Leu Gly Gln Gln Ser Phe Pro Pro
               5
                                   10
                                                       15
```

```
Gln Gln Pro Tyr
           20
<210>
       142
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Leu Val Gln Gln Gln Phe Leu Gly Gln Gln Pro Phe Pro Pro
                                   10
Gln Gln Pro Tyr
           20
<210>
       143
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Leu Val Gln Gln Gln Phe Pro Gly Gln Gln Pro Phe Pro Pro
Gln Gln Pro Tyr
           20
<210>
       144
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Val Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro
                                  10
Gln Gln Pro Tyr
           20
       145
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Leu Val Gln Gln Gln Phe Pro Gly Gln Gln Gln Phe Pro Pro
                                   10
Gln Gln Pro Tyr
```

20

```
146
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        146
Leu Met Gln Gln Gln Gln Phe Pro Gly Gln Gln Glu Gln Phe Pro
                                     10
Pro Gln Gln Pro
            20
<210>
        147
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Leu Met Gln Gln Gln Gln Phe Pro Gly Gln Gln Glu Arg Phe Pro
                                     10
Pro Gln Gln Pro
            20
<210>
        148
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        148
Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln
Pro Phe Pro Ser
            20
<210>
        149
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln
                                    10
Phe Pro Ser Gln
            20
```

```
<210>
       150
        20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400> 150
Gly Gln Gln Ger Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln
                                   10
Pro Phe Pro Ser
           20
<210>
       151
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       151
Gly Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro Gln Gln Gln
Pro Phe Pro Ser
           20
<210>
       152
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
       152
Gly Gln Gln Gln Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln
                                   10
Pro Phe Pro Ser
           20
<210>
      153
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gly Gln Glu Gln Phe Pro Pro Gln Gln Pro Tyr Pro His Gln Gln
         5
                                   10
Pro Phe Pro Ser
           20
```

```
<210>
      154
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 154
Gly Gln Glu Arg Phe Pro Pro Gln Gln Pro Tyr Pro His Gln Gln
                                   10
Pro Phe Pro Ser
           20
<210>
       155
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
Gln Gln Pro Tyr Pro Gln Pro Gln Pro Phe Pro Ser Gln Leu Pro Tyr
Leu Gln Leu Gln
           20
<210>
       156
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       156
Gln Gln Pro Tyr Pro Gln Pro Gln Phe Pro Ser Gln Leu Pro Tyr Leu
                                  10
Gln Leu Gln Pro
           20
<210>
      157
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 157
Gln Gln Pro Tyr Pro Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr
                                   10
Leu Gln Leu Gln
           20
```

```
158
<210>
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 158
Gln Gln Pro Tyr Pro Gln Gln Gln Pro Phe Pro Ser Gln Gln Pro Tyr
     5
                                  10
Met Gln Leu Gln
           20
        159
<210>
<211>
       20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Gln Pro Tyr Pro His Gln Gln Pro Phe Pro Ser Gln Gln Pro Tyr
Pro Gln Pro Gln
<210>
       160
<211>
       20
<212>
      PRT
<2:13>
      Artificial Sequence
<220>
<223>
      peptide
<400> 160
Pro Phe Pro Ser Gln Leu Pro Tyr Leu Gln Leu Gln Pro Phe Pro Gln
Pro Gln Leu Pro
         20
<210>
       161
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       161
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Pro Gln
                                  10
           5
Pro Gln Leu Pro
           20
<210> 162
```

```
20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 162
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Ser Gln
                                  10
Pro Gln Leu Pro
        20
<210>
       163
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       163
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Leu Gln
Pro Gln Leu Pro
           20
<210>
       164
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Leu Gln
Pro Gln Pro Phe
           20
      165
<210>
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400>. 165
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Pro Gln
                                  10
Pro Gln Leu Pro
           20
<210>
      166
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 166
Pro Phe Pro Ser Gln Gln Pro Tyr Met Gln Leu Gln Pro Phe Pro Gln
                                  10
Pro Gln Leu Pro
      ` 20
<210> 167
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Pro Phe Pro Ser Gln Gln Pro Tyr Met Gln Leu Gln Pro Phe Pro Gln
                                  10
Pro Gln Pro Phe
          20
<210>
       168
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       168
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Pro Gln
Pro Gln Pro Phe
           20
      169
<210>
       20
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Pro Arg
        5
                                  10
Pro Gln Leu Pro
           20
<210>
      170
<211>
       20
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223> peptide
<400> 170
Pro Phe Pro Ser Gln Gln Pro Tyr Pro Gln Pro Gln Pro Phe Pro Pro
                                   10
Gln Leu Pro Tyr
        20
<210>
       171
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 171
Pro Phe Pro Ser Gln Gln Pro Tyr Pro Gln Pro Gln Pro Phe Pro Gln
                                   10
Pro Gln Pro Phe
           20
<210>
       172
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       172
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Ser Gln Pro
                                   10
Gln Pro Phe Arg
           20
<210>
       173
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
       173
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Ser Gln Pro
                                   10
Gln Gln Phe Arg
        20
<210>
      174
<211>
       20
<212>
       PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 174
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Leu Gln Pro
                                  10
Gln Pro Phe Arg
          20
<210>
       175
<211> 20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Ser Tyr Ser Gln Pro
                                  10
Gln Pro Phe Arg
          20
<210>
       176
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 176
Leu Gln Leu Gln Pro Phe Ser Gln Pro Gln Leu Pro Tyr Ser Gln Pro
Gln Pro Phe Arg
           20
<210>
       177
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
       177
Leu Gln Leu Gln Pro Phe Leu Gln Pro Gln Leu Pro Tyr Ser Gln Pro
       5
                                  10
Gln Pro Phe Arg
           20
<210>
       178
<211>
       20
<212>
       PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 178
Leu Gln Leu Gln Pro Phe Leu Gln Pro Gln Pro Phe Pro Pro Gln Leu
                                   10
Pro Tyr Ser Gln
           20
<210>
        179
<211>
        20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       179
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro
                                    10
Gln Leu Pro Tyr
           20
<210>
        180
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Met Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro
                                    10
Gln Leu Pro Tyr
           20
<210>
       181
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       181
Met Gln Leu Gln Pro Phe Pro Gln Pro Gln Pro Phe Pro Fro Gln Leu
                                    10
                                                        15
Pro Tyr Pro Gln
           20
<210>
       182
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 182
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro
                                   10
Gln Pro Phe Arg
           20
<210>
        183
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Pro Phe Pro Pro Gln Leu
                                    10
Pro Tyr Pro Gln
<210>
       184
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       184
Leu Gln Leu Gln Pro Phe Pro Arg Pro Gln Leu Pro Tyr Pro Gln Pro
                                   10
                                                       15
Gln Pro Phe Arg
           20
<210>
       185
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
      185
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Pro Phe Leu Pro Gln Leu
                                   10
Pro Tyr Pro Gln
           20
<210>
      186
<211>
       20
      PRT
<212>
<213> Artificial Sequence
<220>
```

```
<223> peptide
<400> 186
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Pro Phe Pro Pro Gln Leu
    5
                      10
Pro Tyr Pro Gln
          20
<210>
       187
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Pro Gln Pro Gln Pro Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln
Pro Phe Pro Pro
<210>
       188
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
     peptide
<400>
       188
Pro Gln Pro Gln Pro Phe Pro Gln Pro Phe Pro Pro Gln Leu
Pro Tyr Pro Gln
         20
<210>
       189
       20
<211>
<212>
      PRT
     Artificial Sequence
<213>
<220>
<223>
     peptide
<400>
       189
Pro Gln Leu Pro Tyr Ser Gln Pro Gln Pro Phe Arg Pro Gln Gln Pro
        5
Tyr Pro Gln Pro
          20
       190
<210>
<211>
       20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223> peptide
```

```
Pro Gln Leu Pro Tyr Ser Gln Pro Gln Gln Phe Arg Pro Gln Gln Pro
                                 10
Tyr Pro Gln Pro
<210>
       191
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 191
Pro Gln Leu Pro Tyr Leu Gln Pro Gln Pro Phe Arg Pro Gln Gln Pro
Tyr Pro Gln Pro
           20
<210>
       192
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400> 192
Pro Gln Leu Ser Tyr Ser Gln Pro Gln Pro Phe Arg Pro Gln Gln Pro
Tyr Pro Gln Pro
<210>
      193
<211>
      20
      PRT
<212>
<213> Artificial Sequence
<220>
<223> peptide
<400> 193
Pro Gln Leu Ser Tyr Ser Gln Pro Gln Pro Phe Arg Pro Gln Gln Leu
Tyr Pro Gln Pro
. 20
      194
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
```

```
<400> 194
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Ser Gln Pro Gln Pro Phe
                                   10
Arg Pro Gln Gln
           20
       195
<210>
<211>
      20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223> peptide
<400> 195
Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Leu Pro Tyr Pro
        20
<210>
       196
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 196
Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln
Pro Phe Arg Pro
           20
      197
<210>
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223> peptide
       197
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro
                                  10
Tyr Pro Gln Pro
           20
<210>
       198
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      198
```

```
Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro Gln Gln Pro
                                    10
Tyr Pro Gln Pro
           20
<210>
        199
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       199
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe
                                    10
Arg Pro Gln Gln
           20
       200
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Pro Pro Phe
Ser Pro Gln Gln
           20
<210>
       201
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       201
Pro Gln Pro Phe Leu Pro Gln Leu Pro Tyr Pro Gln Pro Gln Ser Phe
Pro Pro Gln Gln
           20
<210>
       202
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       202
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Pro Gln Ser Phe
```

```
10
                                                     15
1
Pro Pro Gln Gln
          20
<210>
       203
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 203
Gln Leu Pro Tyr Pro Gln Thr Gln Pro Phe Pro Pro Gln Gln Pro Tyr
                                  10
Pro Gln Pro Gln
          20
<210>
       204
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       204
Pro Gln Pro Phe Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln Pro Phe
       5 10
Pro Pro Gln Gln
        20
<210>
       205
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
       205
Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro Gln Gln Pro Tyr Pro
                                  10
                                                     15
Gln Ser Gln Pro
          20
<210>
       206
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
<400>
Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro Gln Gln Ser Tyr Pro
```

```
Gln Pro Gln Pro
           20
<210>
        207
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 207
Leu Pro Tyr Pro Gln Pro Pro Pro Phe Ser Pro Gln Gln Pro Tyr Pro
                                    10
Gln Pro Gln Pro
           20
<210>
        208
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Pro Gln Leu Pro Tyr Pro Gln Pro Gln Ser Phe Pro Pro Gln Gln
Pro Tyr Pro Gln
<210>
       209
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       209
Pro Pro Gln Leu Pro Tyr Pro Gln Thr Gln Pro Phe Pro Pro Gln Gln
Pro Tyr Pro Gln
           20
<210>
       210
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       210
Gln Pro Phe Arg Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr
               5
                                    10
```

```
Ser Gln Pro Gln
<210>
      211
<211>
      20
<212>
      PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 211
Gln Pro Phe Arg Pro Gln Gln Leu Tyr Pro Gln Pro Gln Pro Gln Tyr
                                 10
Ser Gln Pro Gln
           20
<210>
       212
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
       212
<400>
Gln Pro Phe Arg Pro Gln Gln Pro Tyr Pro Gln Ser Gln Pro Gln Tyr
Ser Gln Pro Gln
           20
<210>
       213
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
Gln Pro Phe Arg Pro Gln Gln Ser Tyr Pro Gln Pro Gln Pro Gln Tyr
Ser Gln Pro Gln
      20
<210>
      214
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 214
Pro Pro Phe Ser Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr
                                 10
Pro Gln Pro Gln
```

20

```
<210>
        215
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        215
Gln Ser Phe Pro Pro Gln Gln Pro Tyr Pro Gln Gln Arg Pro Lys Tyr
                                     10
Leu Gln Pro Gln
            20
<210>
        216
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        216
Gln Ser Phe Pro Pro Gln Gln Pro Tyr Pro Gln Gln Arg Pro Met Tyr
Leu Gln Pro Gln
            20
<210>
        217
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        217
Gln Ser Phe Pro Pro Gln Gln Pro Tyr Pro Gln Gln Gln Pro Gln Tyr
                                                         15
                                    10
Leu Gln Pro Gln
            20
<210>
        218
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        218
Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr
                                    10
Pro Gln Pro Gln
```

```
20
```

```
219
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 219
Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro Ile Ser
                    10
Gln Gln Gln Gln
          20
<210>
       220
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Glu Pro Ile Ser
Gln Gln Gln Gln
           20
<210>
       221
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       221
Tyr Pro Gln Ser Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro Ile Ser
Gln Gln Gln Gln
           20
      222
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Tyr Pro Gln Pro Gln Pro Gln Tyr Pro Gln Pro Gln Gln Pro Ile Ser
        5
                                                     15
                                  10
Gln Gln Gln Ala
           20
```

```
<210>
        223
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400> 223
Tyr Pro Gln Gln Arg Pro Lys Tyr Leu Gln Pro Gln Gln Pro Ile Ser
                                   10
Gln Gln Gln Ala
           20
<210>
        224
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        224
Tyr Pro Gln Gln Arg Pro Met Tyr Leu Gln Pro Gln Gln Pro Ile Ser
                                    10
Gln Gln Gln Ala
           20
<210>
        225
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Tyr Pro Gln Gln Pro Gln Tyr Leu Gln Pro Gln Gln Pro Ile Ser
Gln Gln Gln Ala
<210>
       226
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 226
Ser Gln Pro Gln Gln Pro Ile Ser Gln Gln Gln Gln Gln Gln Gln Gln
                                   10
Gln Gln Gln
           20
```

```
<210> 227
<211>
      20
      PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
     peptide
<400> 227
Ser Gln Pro Gln Glu Pro Ile Ser Gln Gln Gln Gln Gln Gln Gln Gln
                            10
Gln Gln Gln Ile
         20
      228
<210>
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
Pro Gln Pro Gln Gln Pro Ile Ser Gln Gln Gln Ala Gln Gln Gln
                             10
Gln Gln Gln
<210>
      229
<211>
      20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223>
      peptide
      229
<400>
10
Ile Leu Gln Gln
         20
      230
<210>
      20
<211>
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      230
15
            5
                             10
Ile Leu Gln Gln
         20
<210> 231
```

```
20
<211>
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
10
Ile Ile Gln Gln
         20
<210>
      232
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      232
Gln Gln Gln Gln Gln Gln Gln Gln Lys Gln Gln Gln Gln
Gln Gln Gln Ile
         20
<210>
      233
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
10
                                             15
Thr Leu Gln Gln
         20
<210>
      234
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      234
Gln Gln Gln Gln Gln Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln
                             10
Gln Leu Ile Pro
         20
<210>
      235
<211>
      20
```

```
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       235
Gln Gln Gln Gln Glu Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln
                                  10
Gln Leu Ile Pro
          20
<210>
       236
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       236
Gln Gln Gln Gln Glu Gln Gln Ile Leu Gln Gln Met Leu Gln Gln
           5
                                  10
Gln Leu Ile Pro
           20
<210>
       237
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 237
Gln Gln Gln Gln Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln
Gln Leu Thr Pro
           20
<210>
       238
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Gln Gln Gln Gln Gln Gln Ile Ile Gln Gln Ile Leu Gln Gln
                                  10
Gln Leu Ile Pro
           20
<210>
       239
<211>
       20
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
        239
Gln Gln Lys Gln Gln Gln Gln Gln Gln Gln Ile Leu Gln Gln Ile
                                   10
Leu Gln Gln Gln
           20
<210>
        240
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        240
Gln Gln Gln Gln Gln Gln Ile Leu Pro Gln Ile Leu Gln Gln
Gln Leu Ile Pro
           20
<210>
       241
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       241
Gln Gln Gln Gln Gln Gln Gln Thr Leu Gln Gln Ile Leu Gln Gln
                                   10
                                                       15
Gln Leu Ile Pro
           20
<210>
       242
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       242
Ile Leu Gln Gln Ile Leu Gln Gln Leu Ile Pro Cys Met Asp Val
                                   10
Val Leu Gln Gln
           20
<210>
       243
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
```

```
<220>
<223> peptide
<400> 243
Ile Leu Gln Gln Met Leu Gln Gln Leu Ile Pro Cys Met Asp Val
Val Leu Gln Gln
          20
<210>
       244
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 244
Ile Leu Gln Gln Ile Leu Gln Gln Leu Thr Pro Cys Met Asp Val
                                  10
Val Leu Gln Gln
           20
<210>
       245
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       245
Ile Leu Gln Gln Ile Leu Gln Gln Leu Ile Pro Cys Arg Asp Val
Val Leu Gln Gln
           20
      246
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
<400>
       246
Ile Leu Pro Gln Ile Leu Gln Gln Leu Ile Pro Cys Arg Asp Val
           5
                                10
                                                     15
Val Leu Gln Gln
           20
      247
<210>
<211>
       20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 247
Thr Leu Gln Gln Ile Leu Gln Gln Gln Leu Ile Pro Cys Arg Asp Val
Val Leu Gln Gln
    20
<210>
       248
<211> 20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
Gln Leu Ile Pro Cys Met Asp Val Val Leu Gln Gln His Asn Ile Ala
                                  10
His Gly Arg Ser
          20
       249
<210>
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 249
Gln Leu Ile Pro Cys Met Asp Val Val Leu Gln Gln His Asn Lys Ala
His Gly Arg Ser
           20
      250
<210>
<211>
      20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Gln Leu Ile Pro Cys Met Asp Val Val Leu Gln Gln His Asn Leu Ala
His Gly Arg Ser
          20
<210>
       251
<211>
       20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 251
Gln Leu Ile Pro Cys Met Asp Val Val Leu Gln Gln His Asn Ile Val
His Gly Arg Ser
       252
<210>
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       252
Gln Leu Thr Pro Cys Met Asp Val Val Leu Gln Gln His Asn Ile Ala
Arg Gly Arg Ser
<210>
       253
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Gln Leu Ile Pro Cys Met Asp Val Val Leu Gln Gln His Asn Ile Val
His Gly Lys Ser
          20
       254
<210>
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 254
Gln Leu Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Ser Ile Ala
Tyr Gly Ser Ser
           20
<210>
       255
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 255
Gln Leu Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Ser Ile Ala
His Gly Ser Ser
          20
<210>
       256
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Gln Leu Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Asn Ile Ala
His Gly Ser Ser
           20
<210>
       257
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       257
Gln Leu Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Asn Ile Ala
His Ala Arg Ser
      258
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Gln Leu Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Asn Ile Ala
His Ala Ser Ser
           20
<210>
      259
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
Val Leu Gln Gln His Asn Ile Ala His Gly Arg Ser Gln Val Leu Gln
Gln Ser Thr Tyr
            20
<210>
        260
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 260
Val Leu Gln Gln His Asn Lys Ala His Gly Arg Ser Gln Val Leu Gln
                                    10
Gln Ser Thr Tyr
           20
        261
<210>
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Val Leu Gln Gln His Asn Leu Ala His Gly Arg Ser Gln Val Leu Gln
                                    10
Gln Ser Thr Tyr
            20
<210>
       262
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Val Leu Gln Gln His Asn Ile Val His Gly Arg Ser Gln Val Leu Gln
Gln Ser Thr Tyr
           20
<210>
       263
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
```

```
<400> 263
Val Leu Gln Gln His Asn Ile Ala Arg Gly Arg Ser Gln Val Leu Gln
    5
                                   10
Gln Ser Thr Tyr
        20
<210>
        264
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Val Leu Gln Gln His Asn Ile Val His Gly Lys Ser Gln Val Leu Gln
                                   10
Gln Ser Thr Tyr
<210>
       265
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 265
Val Leu Gln Gln His Ser Ile Ala Tyr Gly Ser Ser Gln Val Leu Gln
                                   10
Gln Ser Thr Tyr
           20
<210>
       266
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       266
Val Leu Gln Gln His Ser Ile Ala His Gly Ser Ser Gln Val Leu Gln
              5
                                   10
Gln Ser Thr Tyr
           20
<210>
       267
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       267
```

```
Val Leu Gln Gln His Asn Ile Ala His Gly Ser Ser Gln Val Leu Gln
Glu Ser Thr Tyr
        20
<210>
       268
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       268
Val Leu Gln Gln His Asn Ile Ala His Ala Arg Ser Gln Val Leu Gln
    5
                            10
Gln Ser Thr Tyr
           20
       269
<210>
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
Val Leu Gln Gln His Asn Ile Ala His Ala Ser Ser Gln Val Leu Gln
Gln Ser Thr Tyr
<210>
       270
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       270
Val Leu Gln Gln His Asn Ile Ala His Ala Ser Ser Gln Val Leu Gln
                                  10
Gln Ser Ser Tyr
           20
<210>
       271
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       271
His Gly Arg Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Leu Gln
```

```
10
                                                        15
1
Glu Leu Cys Cys
          20
<210>
       272
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
His Gly Arg Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Leu Arg
                                   10
Glu Leu Cys Cys
          20
<210>
       273
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
His Gly Arg Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Leu Arg
Glu Leu Cys Cys
<210>
       274
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       274
His Gly Lys Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Leu Gln
Glu Leu Cys Cys
<210>
       275
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 275
Tyr Gly Ser Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Val Gln
                                   10
```

```
Gln Leu Cys Cys
         20
        276
<210>
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400> 276
His Gly Ser Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Val Gln
                                    10
Gln Phe Cys Cys
            20
        277
<210>
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        277
His Gly Ser Ser Gln Val Leu Gln Glu Ser Thr Tyr Gln Leu Val Gln
Gln Leu Cys Cys
<210>
        278
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400>
        278
His Ala Arg Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Pro Leu Gln
                                    10
Gln Leu Cys Cys
            20
<210>
        279
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       279
His Ala Ser Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Leu Gln
                5
```

```
Gln Leu Cys Cys
<210>
       280
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 280
His Ala Ser Ser Gln Val Leu Gln Gln Ser Ser Tyr Gln Gln Leu Gln
                                  10
Gln Leu Cys Cys
          20
<210>
       281
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Gln Ser Thr Tyr Gln Leu Ceu Gln Glu Leu Cys Cys Gln His Leu Trp
Gln Ile Pro Glu
       20
<210>
       282
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
     peptide
<400>
Gln Ser Thr Tyr Gln Leu Leu Arg Glu Leu Cys Cys Gln His Leu Trp
Gln Ile Pro Glu
           20
<210>
      283
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400> 283
Gln Ser Thr Tyr Gln Leu Leu Arg Glu Leu Cys Cys Gln His Leu Trp
             5
```

```
Gln Ile Pro Glu
           20
<210>
        284
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 284
Gln Ser Thr Tyr Gln Leu Val Gln Gln Leu Cys Cys Gln Gln Leu Trp
                                    10
Gln Ile Pro Glu
           20
<210>
       285
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       285
Gln Ser Thr Tyr Gln Leu Val Gln Gln Phe Cys Cys Gln Gln Leu Trp
Gln Ile Pro Glu
           20
<210>
       286
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       286
Gln Ser Thr Tyr Gln Pro Leu Gln Gln Leu Cys Cys Gln Gln Leu Trp
Gln Ile Pro Glu
           20
<210>
       287
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       287
Gln Ser Thr Tyr Gln Leu Gln Gln Leu Cys Cys Gln Gln Leu Leu
                                   10
Gln Ile Pro Glu
```

20

```
<210>
        288
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 288
Gln Ser Ser Tyr Gln Gln Leu Gln Gln Leu Cys Cys Gln Gln Leu Phe
                                   10
Gln Ile Pro Glu
           20
<210>
        289
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Glu Leu Cys Cys Gln His Leu Trp Gln Ile Pro Glu Gln Ser Gln Cys
Gln Ala Ile His
           20
<210>
       290
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       290
Glu Leu Cys Cys Gln His Leu Trp Gln Ile Leu Glu Gln Ser Gln Cys
Gln Ala Ile His
           20
       291
<210>
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       291
Glu Leu Cys Cys Gln His Leu Trp Gln Ile Pro Glu Lys Leu Gln Cys
Gln Ala Ile His
            20
```

```
292
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 292
Gln Leu Cys Cys Gln Gln Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys
                                   10
Gln Ala Ile His
           20
<210>
        293
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      293
Gln Phe Cys Cys Gln Gln Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys
Gln Ala Ile His
           20
<210>
       294
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       294
Gln Leu Cys Cys Gln Gln Leu Leu Gln Ile Pro Glu Gln Ser Arg Cys
Gln Ala Ile His
           20
<210>
       295
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 295
Gly Leu Cys Cys Gln Gln Leu Leu Gln Ile Pro Glu Gln Ser Gln Cys
Gln Ala Ile His
            20
```

```
<210>
        296
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       296
Gln Leu Cys Cys Gln Gln Leu Phe Gln Ile Pro Glu Gln Ser Arg Cys
                                   10
Gln Ala Ile His
           20
<210>
        297
<211>
       20
<212>
      PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 297
Gln Ile Pro Glu Gln Ser Gln Cys Gln Ala Ile His Asn Val Val His
                                   10
Ala Ile Ile Leu
           20
<210>
        298
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 298
Gln Ile Pro Glu Gln Ser Gln Cys Gln Ala Ile Gln Asn Val Val His
Ala Ile Ile Leu
           20
<210>
      299
<211>
      20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Gln Ile Leu Glu Gln Ser Gln Cys Gln Ala Ile His Asn Val Val His
                                 10
Ala Ile Ile Leu
           20
<210> 300
```

```
<211>
       20
<212>
      PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
<400> 300
Gln Ile Pro Glu Gln Ser Gln Cys Gln Ala Ile His Lys Val Val His
                                  10
Ala Ile Ile Leu
        20
<210>
       301
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400>
       301
Gln Ile Pro Glu Lys Leu Gln Cys Gln Ala Ile His Asn Val Val His
                                  10
Ala Ile Ile Leu
           20
<210>
       302
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala Ile His Asn Val Val His
Ala Ile Ile Leu
           20
<210>
       303
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       303
Gln Ile Pro Glu Gln Ser Gln Cys Gln Ala Ile His Asn Val Ala His
Ala Ile Ile Met
           20
       304
<210>
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 304
Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala Ile His Asn Val Val His
    5
                                 10
Ala Ile Ile Leu
          20
<210>
       305
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 305
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln
                                  10
Lys Gln Gln Gln
           20
<210>
       306
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln
Gln Lys Gln Gln
           20
<210>
       307
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220> \
<223> peptide
<400>
       307
Gln Ala Ile Gln Asn Val Val His Ala Ile Ile Leu His Gln Gln
                                  10
        5
Lys Gln Gln Gln
           20
<210>
       308
<211>
       20
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       308
Gln Ala Ile His Lys Val Val His Ala Ile Ile Leu His Gln Gln
                                 10
Lys Gln Gln Gln
          20
<210>
       309
<211>
       20
<212>
       PRT
<213>
     Artificial Sequence
<220>
<223>
      peptide
<400>
       309
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln
Gln Gln Gln
           20
<210>
       310
      20
<211>
      PRT
<212>
<213>
     Artificial Sequence
<220>
<223> peptide
<400>
       310
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln His
                   - 10
His His His Gln
          20
<210>
      311
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
       311
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln
                                 10
Arg Gln Gln Gln
           20
<210>
       312
<211>
       20
<212>
     PRT
```

```
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
        312
Gln Ala Ile His Asn Val Val His Ala Ile Ile Met His Gln Glu
                                   10
Gln Gln Gln Gln
           20
<210>
        313
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        313
Gln Ala Ile His Asn Val Ala His Ala Ile Ile Met His Gln Gln
                                   10
Gln Gln Gln
           20
<210>
       314
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Ala Ile His Asn Val Val His Ala Ile Ile Leu His His Gln
                                   10
                                                      15
Gln Gln Gln
           20
<210>
       315
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       315
Ala Ile Ile Leu His Gln Gln Gln Lys Gln Gln Gln Pro Ser Ser
                                   10
Gln Val Ser Phe
           20
<210>
       316
<211>
       20
<212>
<213>
      Artificial Sequence
```

```
<220>
<223>
       peptide
<400>
       316
Ala Ile Ile Leu His Gln Gln Gln Gln Lys Gln Gln Gln Pro Ser
                                    10
Ser Gln Phe Ser
           20
<210>
       317
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ala Ile Ile Leu His Gln Gln Gln Lys Gln Gln Gln Leu Ser Ser
Gln Val Ser Phe
           20
<210>
       318
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       318
Ala Ile Ile Leu His Gln Gln Gln Lys Gln Gln Gln Pro Ser Ser Gln
Val Ser Phe Gln
           20
<210>
       319
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       319
Ala Ile Ile Leu His Gln Gln Gln Gln Gln Gln Gln Gln Gln Lys Gln
               5
                                    10
                                                        15
Gln Leu Gln Gln
           20
<210>
       320
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
```

```
<220>
<223>
       peptide
<400>
       320
10
Gln Pro Leu Ser
          20
<210>
       321
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400>
       321
Ala Ile Ile Leu His Gln Gln His His His Gln Gln Gln Gln Gln
                                10
Gln Gln Gln
          20
       322
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ala Ile Ile Leu His Gln Gln His His His Gln Glu Gln Lys Gln
                                10
Gln Leu Gln Gln
          20
<210>
       323
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       323
Ala Ile Ile Leu His Gln Gln Gln Arg Gln Gln Pro Ser Ser Gln
                                10
                                                   15
Val Ser Leu Gln
          20
<210>
       324
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide ·
<400> 324
Ala Ile Ile Met His Gln Gln Gln Gln Gln Gln Leu Gln Gln
                                  10
Gln Gln Gln
          20
       325
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Ala Ile Ile Met His Gln Gln Gln Gln Gln Gln Gln Gln Lys Gln
                                  10
Gln Leu Gln Gln
           20
<210>
       326
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       326
Ala Ile Ile Leu His His Gln Gln Gln Gln Gln Pro Ser Ser
Gln Val Ser Tyr
           20
       327
<210>
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       327
Lys Gln Gln Gln Pro Ser Ser Gln Val Ser Phe Gln Gln Pro Leu
               5
                                  10
                                                      15
Gln Gln Tyr Pro
           20
<210>
       328
       20
<211>
       PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
     peptide
```

```
Lys Gln Gln Gln Pro Ser Ser Gln Phe Ser Phe Gln Gln Pro Leu
                                  10
Gln Gln Tyr Pro
          20
<210>
       329
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
       329
<400>
Lys Gln Gln Gln Leu Ser Ser Gln Val Ser Phe Gln Gln Pro Gln
Gln Gln Tyr Pro
           20
<210>
       330
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
Lys Gln Gln Gln Pro Ser Ser Gln Val Ser Phe Gln Gln Pro Gln Gln
Gln Tyr Pro Leu
<210>
       331
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       331
Gln Gln Gln Gln Gln Lys Gln Gln Leu Gln Gln Gln Gln Gln
                                  10
Gln Gln Gln Leu
           20
<210>
      332
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
```

```
<400> 332
His His His Gln Glu Gln Lys Gln Gln Leu Gln Gln Gln Gln Gln
Gln Gln Gln Leu
          20
<210>
       333
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
     peptide
<223>
<400> 333
Arg Gln Gln Pro Ser Ser Gln Val Ser Leu Gln Gln Pro Gln Gln
                               10
Gln Tyr Pro Ser
         20
<210>
       334
<211>
       20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223>
      peptide
<400>
      334
Gln Gln Gln
          20
<210>
       335
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
Gln Gln Gln Gln Pro Ser Ser Gln Val Ser Tyr Gln Gln Pro Gln
Glu Gln Tyr Pro
         20
<210>
      336
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      336
```

```
Gln Leu Gln Gln Gln Gln Gln Gln Gln Leu Gln Gln Gln Gln
                                   10
Gln Lys Gln Gln
           20
<210>
       337
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       337
Gln Gln Gln Leu Gln Gln Gln Gln Lys Gln Gln Gln Gln Pro Ser
                                   10
Ser Gln Val Ser
           20
<210>
       338
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       338
Gln Gln Gln Gln Gln Gln Gln Fro Leu Ser Gln Val Ser Phe
                                   10
Gln Gln Pro Gln
           20
<210>
       339
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       339
Gln Gln Gln Gln Gln Gln Gln Fro Leu Ser Gln Val Cys Phe
                                   10
Gln Gln Ser Gln
           20
<210>
       340
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       340
His His Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Leu Ser
```

```
10
                                                        15
Gln Val Ser Phe
<210>
        341
<211>
        20
        PRT
<212>
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Gln Gln Gln Gln Gln Gln Pro Ser Ser Gln Val Ser Phe
                                    10
Gln Gln Pro Gln
            20
<210>
        342
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        342
Gln Pro Leu Ser Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro
Ser Gly Gln Gly
            20
        343
<210>
<211>
       20
<212> PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Pro Leu Ser Gln Val Cys Phe Gln Gln Ser Gln Gln Gln Tyr Pro
Ser Gly Gln Gly
            20
<210>
       344
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       344
Gln Pro Ser Ser Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro
```

```
10
                                                         15
Ser Ser Gln Val
            20
        345
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Val Ser Phe Gln Gln Pro Leu Gln Gln Tyr Pro Leu Gly Gln Gly
                                    10
Ser Phe Arg Pro
           20
<210>
        346
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        346
Gln Phe Ser Phe Gln Gln Pro Leu Gln Gln Tyr Pro Leu Gly Gln Gly
Ser Phe Arg Pro
            20
<210>
        347
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
        347
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Leu Gly Gln Gly
Ser Phe Arg Pro
            20
        348
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        348
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly
                                    10
```

```
Ser Phe Gln Pro
           20
<210>
       349
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       349
Gln Val Cys Phe Gln Gln Ser Gln Gln Gln Tyr Pro Ser Gly Gln Gly
                                    10
Ser Phe Gln Pro
           20
<210>
       350
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly
Phe Phe Gln Pro
           20
<210>
       351
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       351
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly
Phe Phe Gln Pro
           20
       352
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       352
Gln Val Ser Leu Gln Gln Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly
               5
                                    10
```

```
Phe Phe Gln Pro
           20
<210>
        353
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
      peptide
<400>
        353
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Ser Ser Gln Val
                                    10
Ser Phe Gln Pro
           2.0
<210>
        354
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        354
Gln Val Ser Phe Gln Gln Pro Gln Gln Gln Tyr Pro Ser Ser Gln Gly
Ser Phe Gln Pro
            20
<210>
       355
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Val Ser Tyr Gln Gln Pro Gln Glu Gln Tyr Pro Ser Gly Gln Val
                                   10
Ser Phe Gln Ser
           20
<210>
      356
<211>
      20
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 356
Gln Gln Tyr Pro Leu Gly Gln Gly Ser Phe Arg Pro Ser Gln Gln Asn
                                   10
Pro Gln Ala Gln
```

20

```
<210>
        357
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        357
Gln Gln Tyr Pro Leu Gly Gln Gly Ser Phe Arg Pro Ser Gln Gln Asn
Ser Gln Ala Gln
            20
        358
<210>
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Gln Tyr Pro Ser Gly Gln Gly Ser Phe Gln Pro Ser Gln Gln Asn
Pro Gln Ala Gln
<210>
        359
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        359
Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Ser Gln Gln Asn
Pro Gln Ala Gln
            20
<210>
       360
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Phe Gln Gln Asn
                                    10
                                                         15
Pro Gln Ala Gln
            20
```

```
361
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Ser Gln Gln Asn
                                     10
Pro Gln Ala Gln
            20
<210>
        362
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        362
Gln Gln Tyr Pro Ser Ser Gln Val Ser Phe Gln Pro Ser Gln Leu Asn
                                    10
Pro Gln Ala Gln
            20
<210>
        363
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Tyr Pro Ser Ser Gln Gly Ser Phe Gln Pro Ser Gln Gln Asn
                                                         15
Pro Gln Ala Gln
            20
<210>
        364
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Glu Gln Tyr Pro Ser Gly Gln Val Ser Phe Gln Ser Ser Gln Gln Asn
                                     10
Pro Gln Ala Gln
            20
```

```
<210> 365
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 365
Ser Phe Arg Pro Ser Gln Gln Asn Pro Leu Ala Gln Gly Ser Val Gln
                                  10
Pro Gln Gln Leu
         20
       366
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Ser Phe Arg Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val Gln
                                   10
Pro Gln Gln Leu
<210>
       367
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
       367
<400>
Ser Phe Arg Pro Ser Gln Gln Asn Pro Gln Thr Gln Gly Ser Val Gln
Pro Gln Gln Leu
           20
<210>
       368
       20
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       368
Ser Phe Arg Pro Ser Gln Gln Asn Ser Gln Ala Gln Gly Ser Val Gln
               5
                                   10
Pro Gln Gln Leu
           20
<210> 369
```

```
<211> 20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 369
Ser Phe Arg Pro Ser Gln Gln Asn Pro Gln Asp Gln Gly Ser Val Gln
                                   10
Pro Gln Gln Leu
           20
<210>
       370
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 370
Ser Phe Arg Pro Ser Gln Gln Asn Pro Arg Ala Gln Gly Ser Val Gln
                                   10
Pro Gln Gln Leu
           20
       371
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Ser Phe Gln Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val Gln
Pro Gln Gln Leu
           20
<210>
       372
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 372
Phe Phe Gln Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Phe Gln
                                   10
Pro Gln Gln Leu
           20
<210>
       373
<211>
       20
```

```
<212>
      PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       373
Phe Phe Gln Pro Phe Gln Gln Asn Pro Gln Ala Gln Gly Ser Phe Gln
                                   10
Pro Gln Gln Leu
           20
<210>
        374
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Phe Phe Gln Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val Gln
Pro Gln Gln Leu
           20
<210>
       375
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       375
Ser Phe Gln Pro Ser Gln Leu Asn Pro Gln Ala Gln Gly Ser Val Gln
                                    10
Pro Gln Gln Leu
           20
<210>
       376
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Ser Phe Gln Pro Ser Gln Leu Asn Pro Gln Ala Gln Gly Ser Val Gln
Pro Gln Gln Leu
            20
<210>
       377
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 377
Ser Phe Gln Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val Gln
                    10
Pro Gln Gln Leu
          20
<210>
       378
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Ser Phe Gln Ser Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val Gln
                                  10
Pro Gln Gln Leu
           20
<210>
       379
<211>
       20
      PRT
<212>
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 379
Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
Glu Ile Arg Asn
           20
<210>
       380
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
<400>
       380
Pro Gln Thr Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
            5
                                  10
Glu Ile Arg Asn
           20
<210>
       381
<211>
       20
<212>
      PRT
```

```
<213> Artificial Sequence
<220>
<223> peptide
<400> 381
Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
                                  10
Ile Arg Asn Leu
        20
<210>
       382
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 382
Pro Leu Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
Glu Ile Arg Asn
           20
       383
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Pro Gln Asp Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
Glu Ile Arg Asn
          20
<210>
       384
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 384
Pro Arg Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Glu
Glu Ile Arg Asn
           20
<210>
      385
<211>
       20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400>
       385
Pro Gln Ala Gln Gly Ser Phe Gln Pro Gln Gln Leu Pro Gln Phe Glu
                                   10
Glu Ile Arg Asn
           20
       386
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Ala Gln Gly Ser Phe Gln Pro Gln Gln Leu Pro Gln Phe Glu
Ala Ile Arg Asn
<210>
       387
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       387
Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Ala
Glu Ile Arg Asn
           20
       388
<210>
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       388
Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln Phe Gln
               5
                                   10
Glu Ile Arg Asn
           20
<210>
       389
<211>
      20
      PRT
<212>
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 389
Pro Gln Gln Leu Pro Gln Phe Glu Glu Ile Arg Asn Leu Ala Leu Gln
                                   10
Thr Leu Pro Ala
           20
       390
<210>
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       390
Pro Gln Gln Leu Pro Gln Phe Glu Ile Arg Asn Leu Ala Leu Gln Thr
                                   10
Leu Pro Ala Met
           20
<210>
       391
<211>
       16
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Gln Leu Pro Gln Phe Glu Glu Ile Arg Asn Leu Ala Arg Lys
               5 (
<210>
       392
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       392
Pro Gln Gln Leu Pro Gln Phe Glu Glu Ile Arg Asn Leu Ala Leu Glu
                                   10
Thr Leu Pro Ala
           20
<210>
       393
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
```

```
<400> 393
 Pro Gln Gln Leu Pro Gln Phe Glu Ala Ile Arg Asn Leu Ala Leu Gln
                                    10
 Thr Leu Pro Ala
             20
 <210>
         394
 <211>
         20
 <212>
         PRT
 <213>
         Artificial Sequence
 <220>
 <223> peptide
 <400>
 Pro Gln Gln Leu Pro Gln Phe Ala Glu Ile Arg Asn Leu Ala Leu Gln
                                    10
 Thr Leu Pro Ala
            20
 <210>
         395
 <211>
         20
 <212>
         PRT
 <213>
       Artificial Sequence
 <220>
 <223>
       peptide
 <400>
         395
 Pro Gln Gln Leu Pro Gln Phe Gln Glu Ile Arg Asn Leu Ala Leu Gln
 Thr Leu Pro Ala
             20
 <210>
         396
 <211>
         20
 <212>
        PRT
        Artificial Sequence
 <213>
 <220>
<223>
        peptide
 <400>
 Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Ala Met Cys Asn Val
                                     10
 Tyr Ile Pro Pro
            20
 <210>
         397
 <211>
         20
 <212>
        PRT
 <213>
        Artificial Sequence
 <220>
 <223> peptide
```

```
Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Ser Met Cys Asn Val
                                   10
Tyr Ile Pro Pro
           20
<210>
        398
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 398
Glu Ile Arg Asn Leu Ala Leu Glu Thr Leu Pro Ala Met Cys Asn Val
                                   10
Tyr Ile Pro Pro
           20
<210>
       399
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Arg Met Cys Asn Val
Tyr Ile Pro Pro
<210>
       400
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 400
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile
                                   10
Ala Pro Phe Gly
           20
<210>
       401
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
```

```
<400> 401
Thr Leu Pro Ser Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile
                   10
Ala Pro Phe Gly
          20
       402
<210>
<211>
       20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223> peptide
<400> 402
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile
                                 10
Val Pro Phe Gly
          20
<210>
       403
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
     peptide
<400> 403
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Ala Met
Ala Pro Phe Gly
          20
<210>
       404
<211>
       20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223> peptide
       404
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile
                                 10
Thr Pro Phe Gly
       20
<210>
       405
<211>
       20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223>
     peptide
<400>
       405
```

```
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile
Ala Pro Val Gly
        20
<210>
        406
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       406
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Ser Thr
Thr Ile Ala Pro
           20
<210>
        407
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
      peptide
<223>
Thr Leu Pro Arg Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Ser Thr
Thr Ile Ala Pro
<210>
       408
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 408
Thr Leu Pro Arg Met Cys Asn Val Tyr Ile Pro Pro Tyr Cys Ser Thr
Thr Thr Ala Pro
           20
       409
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
        409
Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Pro Pro His Cys Ser Thr
```

```
10
                                                        15
Thr Ile Ala Pro
           20
<210>
        410
<211>
        19
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        410
Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Phe Gly Ile Phe Gly Thr
Asn Tyr Arg
<210>
        411
<211>
        19
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       411
Tyr Ile Pro Pro Tyr Cys Thr Ile Val Pro Phe Gly Ile Phe Gly Thr
Asn Tyr Arg
<210>
       412
<211>
       19
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
        412
Tyr Ile Pro Pro Tyr Cys Ala Met Ala Pro Phe Gly Ile Phe Gly Thr
Asn Tyr Arg
        413
<210>
<211>
        19
<212>
       PRT
<213>
      Artificial Sequence
<220>
       peptide
<223>
<400>
        413
Tyr Ile Pro Pro Tyr Cys Thr Met Ala Pro Phe Gly Ile Phe Gly Thr
```

```
10
                                                        15
               5
Asn Tyr Arg
<210>
        414
<211>
        17
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Tyr Ile Pro Pro Tyr Cys Thr Ile Thr Pro Phe Gly Ile Phe Gly Thr
Asn
<210>
       415
<211>
        19
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       415
Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Val Gly Ile Phe Gly Thr
Asn Tyr Arg
<210>
       416
<211>
       19
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       416
Tyr Ile Pro Pro Tyr Cys Ser Thr Thr Ile Ala Pro Val Gly Ile Phe
Gly Thr Asn
<210>
      417
      19
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 417
Tyr Ile Pro Pro Tyr Cys Ser Thr Thr Thr Ala Pro Phe Gly Ile Phe
```

```
Gly Thr Asn
<210>
        418
<211>
        19
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        418
Tyr Ile Pro Pro His Cys Ser Thr Thr Ile Ala Pro Phe Gly Ile Phe
Gly Thr Asn
<210>
        419
<211>
        19
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400> ' 419
Tyr Ile Pro Pro His Cys Ser Thr Thr Ile Ala Pro Phe Gly Ile Ser
Gly Thr Asn
<210>
        420
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400>
        420
Ile Pro Pro Tyr Cys Ser Thr Thr Ile Ala Pro Phe Gly Ile Phe Gly
Thr Asn Tyr Arg
            20
<210>
        421
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
       peptide
<223>
<400>
        421
Gly Thr Ala Asn Met Gln Val Asp Pro Ser Ser Gln Val Gln Trp Pro
                5
                                     10
                                                          15
```

```
Gln Gln Gln Pro
            20
<210>
        422
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400> 422
Gly Thr Ala Asn Ile Gln Val Asp Pro Ser Gly Gln Val Gln Trp Leu
                                     10
Gln Gln Gln Leu
            20
<210>
        423
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      423
Ala Thr Ala Asn Met Gln Val Asp Pro Ser Gly Gln Val Pro Trp Pro
Gln Gln Gln Pro
            20
<210>
        424
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       424
Met Asn Ile Gln Val Asp Pro Ser Gly Gln Val Pro Trp Pro Gln Gln
                                    10
Gln Pro Phe Pro
           20
<210>
       425
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       425
Ala Thr Ala Asn Met Gln Ala Asp Pro Ser Gly Gln Val Gln Trp Pro
                                    10
Gln Gln Gln Pro
```

20

```
426
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
      426
Thr Thr Ala Asn Ile Gln Val Asp Pro Ser Gly Gln Val Gln Trp Pro
                                    10
Gln Gln Gln
            20
        427
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
Ala Thr Ala Asn Met Gln Val Asp Pro Ser Gly Gln Val Gln Trp Pro
Gln Gln Gln Pro
<210>
        428
<211>
        19
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       428
Gln Ile Val Phe Pro Ser Gly Gln Val Gln Trp Pro Gln Gln Gln Gln
Pro Phe Pro
<210>
        429
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        429
Pro Ser Ser Gln Val Gln Trp Pro Gln Gln Gln Pro Val Pro Gln Pro
                5
                                    10
                                                         15
His Gln Pro Phe
            20
```

```
<210>
        430
<211>
        20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
<400> 430
Pro Ser Gly Gln Val Gln Trp Leu Gln Gln Gln Leu Val Pro Gln Leu
                                   10
Gln Gln Pro Leu
           20
<210>
        431
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
      431
Pro Ser Gly Gln Val Pro Trp Pro Gln Gln Pro Phe Pro Gln Pro
                                   10
His Gln Pro Phe
           20
<210>
       432
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Ser Gly Gln Val Gln Trp Pro Gln Gln Pro Phe Leu Gln Pro
His Gln Pro Phe
           20
<210>
       433
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      433
Pro Ser Gly Gln Val Gln Trp Pro Gln Gln Gln Pro Phe Pro Gln
                                   10
Pro Gln Gln Pro
           20
```

```
434
<210>
<211>
        20
       PRT
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400> 434
Pro Ser Gly Gln Val Gln Trp Pro Gln Gln Pro Phe Arg Gln Pro
                                   10
Gln Gln Pro Phe
           20
<210>
       435
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Ser Gly Gln Val Gln Trp Pro Gln Gln Gln Pro Phe Pro Gln Pro
Gln Gln Pro Phe
           20
<210>
       436
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 436
Gln Gln Pro Val Pro Gln Pro His Gln Pro Phe Ser Gln Gln Pro
                                   10
Gln Gln Thr Phe
           20
<210>
      437
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Gln Leu Val Pro Gln Leu Gln Gln Pro Leu Ser Gln Gln Pro
               5
Gln Gln Thr Phe
           20
<210> 438
```

```
20
  <211>
  <212>
         PRT
  <213>
         Artificial Sequence
 <220>
  <223>
        peptide
  <400> 438
 Gln Gln Gln Pro Phe Pro Gln Pro His Gln Pro Phe Ser Gln Gln Pro
                                    10
Gln Gln Thr Phe
             20
 <210>
         439
 <211>
         20
  <212>
         PRT
  <213>
        Artificial Sequence
  <220>
  <223>
        peptide
 <400>
        439
 Gln Gln Gln Pro Phe Leu Gln Pro His Gln Pro Phe Ser Gln Gln Pro
          5 .
                                    10
 Gln Gln Ile Phe
             20
 <210>
         440
 <211>
         20
  <212>
         PRT
  <213> Artificial Sequence
 <220>
 <223>
        peptide
 Gln Gln Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Phe Ser Gln Gln
                                    10
 Pro Gln Gln Ile
             20
 <210>
         441
 <211>
         20
 <212>
        PRT
 <213>
        Artificial Sequence
 <220>
 <223>
        peptide
 <400>
        441
 Gln Gln Gln Pro Phe Pro Gln Pro Gln Pro Gln Gln Pro Phe
                                    10
 Pro Gln Pro Gln
             20
 <210>
         442
 <211>
         20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 442
Gln Gln Gln Pro Phe Arg Gln Pro Gln Fro Phe Tyr Gln Gln Pro
                                  10
Gln His Thr Phe
          20
<210>
       443
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400> 443
Gln Gln Gln Pro Phe Pro Gln Pro Gln Pro Phe Cys Gln Gln Pro
                                  10
Gln Arg Thr Ile
           20
<210>
       444
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
      peptide
<223>
<400> 444
Gln Gln Gln Pro Phe Pro Gln Pro Gln Pro Phe Cys Glu Gln Pro
Gln Arg Thr Ile
           20
<210>
       445
<211>
       20
       PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       445
His Gln Pro Phe Ser Gln Gln Pro Gln Gln Thr Phe Pro Gln Pro Gln
       5
                                 10
Gln Thr Phe Pro
           20
<210> 446
```

```
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 446
Gln Gln Pro Leu Ser Gln Gln Pro Gln Gln Thr Phe Pro Gln Pro Gln
                                   10
Gln Thr Phe Pro
         20
<210>
        447
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
      447
His Gln Pro Phe Ser Gln Gln Pro Gln Gln Ile Phe Pro Gln Pro Gln
                                   10
Gln Thr Phe Pro
           20
<210>
       448
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       448
Gln Gln Pro Phe Ser Gln Gln Pro Gln Gln Ile Phe Pro Gln Pro Gln
                                   10
Gln Thr Phe Pro
        20
<210>
       449
<211>
       20
       PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       449
Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Leu Pro
                                   10
                                                       15
Phe Pro Gln Gln
           20
<210>
       450
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 450
Gln Gln Pro Phe Tyr Gln Gln Pro Gln His Thr Phe Pro Gln Pro Gln
                                  10
Gln Thr Cys Pro
          20
<210>
      451
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223> peptide
Gln Gln Pro Phe Cys Gln Gln Pro Gln Arg Thr Ile Pro Gln Pro His
Gln Thr Phe His
       20
<210>
       452
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 452
Gln Gln Pro Phe Cys Gln Gln Pro Gln Gln Thr Ile Pro Gln Pro His
Gln Thr Phe His
          20
      453
<210>
      20
<211>
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
       453
Gln Gln Pro Phe Cys Glu Gln Pro Gln Arg Thr Ile Pro Gln Pro His
Gln Thr Phe His
        20
<210>
      454
<211>
       20
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Thr Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln
                                   10
Gln Gln Phe Pro
           20
<210>
       455
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       455
Gln Gln Ile Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln
                                    10
Gln Gln Phe Pro
           20
<210>
       456
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
       456
Gln Gln Ile Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln
                                    10
Gln Ala Phe Pro
           20
<210>
       457
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       457
Gln Arg Thr Ile Pro Gln Pro His Gln Thr Phe His His Gln Pro Gln
                                    10
                                                        15
            5
Gln Thr Phe Pro
           20
       458
<210>
<211>
       20
<212>
      PRT
```

```
<213> Artificial Sequence
<220>
<223>
      peptide
Gln Thr Phe Pro His Gln Pro Gln Gln Ala Phe Pro Gln Pro Gln Gln
                                   10
Thr Phe Pro His
           20
<210>
        459
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 459
Gln Thr Phe His His Gln Pro Gln Gln Thr Phe Pro Gln Pro Gln Gln
                                   10
Thr Tyr Pro His
           20
<210>
        460
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       460
Gln Thr Phe His His Gln Pro Gln Gln Thr Phe Pro Gln Pro Glu Gln
                                   10
                                                       15
Thr Tyr Pro His
           20
<210>
       461
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       461
Gln Ala Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln Gln
Gln Phe Pro Gln
           20
<210>
       462
<211>
      20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 462
Gln His Thr Phe Pro Gln Pro Gln Gln Thr Cys Pro His Gln Pro Gln
Gln Gln Phe Pro
<210>
       463
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 463
Gln Thr Phe Pro Gln Pro Gln Gln Thr Tyr Pro His Gln Pro Gln Gln
                                  10
Gln Phe Pro Gln
        20
<210>
       464
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
       464
Gln Thr Phe Pro Gln Pro Glu Gln Thr Tyr Pro His Gln Pro Gln Gln
Gln Phe Pro Gln
          20
<210>
       465
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Thr Phe Pro His Gln Pro Gln Gln Gln Phe Pro Gln Pro Gln Gln
                                10
Pro Gln Gln Gln
           20
<210>
       466
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
```

```
<220>
<223>
      peptide
<400>
       466
Gln Thr Phe Pro His Gln Pro Gln Gln Gln Val Pro Gln Pro Gln Gln
                                   10
Pro Gln Gln Pro
           20
<210>
       467
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 467
Gln Thr Phe Pro His Gln Pro Gln Gln Gln Phe Ser Gln Pro Gln Gln
        5
                                   10
Pro Gln Gln Gln
           20
<210>
       468
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Thr Cys Pro His Gln Pro Gln Gln Gln Phe Pro Gln Pro Gln Gln
Pro Gln Gln Pro
<210>
       469
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 469
Gln Thr Tyr Pro His Gln Pro Gln Gln Phe Pro Gln Thr Gln Gln
Pro Gln Gln Pro
           20
       470
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400>
      470
Gln Gln Phe Pro Gln Pro Gln Gln Gln Gln Phe Leu Gln Pro
     5
                                  10
Gln Gln Pro Phe
           20
<210>
       471
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Gln Val Pro Gln Pro Gln Pro Gln Gln Pro Phe Leu Gln Pro
Gln Gln Pro Phe
<210>
       472
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       472
Gln Gln Phe Ser Gln Pro Gln Gln Gln Gln Gln Phe Ile Gln Pro
Gln Gln Pro Phe
          20
<210>
       473
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       473
Gln Gln Phe Pro Gln Pro Gln Gln Gln Gln Gln Phe Leu Gln Pro
               5
                                  10
                                                     15
Arg Gln Pro Phe
           20
<210>
       474
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
     peptide
```

```
Gln Gln Phe Pro Gln Pro Gln Gln Pro Gln Pro Phe Pro Gln Gln
                                    10
Pro Gln Gln Gln
            20
<210>
        475
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        475
Gln Gln Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro
                                    10
Gln Gln Thr Phe
            20
<210>
        476
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
Pro Gln Gln Gln Phe Leu Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro
                                                        15
Gln Gln Pro Tyr
<210>
        477
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      477
Pro Gln Gln Gln Phe Ile Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro
Gln Gln Thr Tyr
            20
       478
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
```

```
<223> peptide
<400>
      478
Pro Gln Gln Gln Phe Ile Gln Pro Gln Gln Pro Gln Gln Thr Tyr Pro
    5
                                   10
Gln Arg Pro Gln
           20
<210>
       479
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Pro Gln Gln Gln Phe Leu Gln Pro Arg Gln Pro Phe Pro Gln Gln Pro
                                   10
Gln Gln Pro Tyr
          20
       480
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       480
Pro Gln Gln Pro Phe Pro Gln Gln Gln Gln Gln Phe Pro Gln Pro
Gln Gln Pro Gln
           20
<210>
       481
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
Pro Gln Gln Pro Phe Pro Gln Pro Gln Pro Gln Gln Pro Phe Pro
               5
                                   10
                                                      15
Gln Pro Gln Gln
           20
<210>
       482
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Thr Phe Pro Gln Gln Pro
                                    10
Gln Leu Pro Phe
           20
<210>
        483
<211>
        20
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       483
Pro Gln Gln Gln Pro Gln Pro Gln Pro Gln Gln Pro Pro Pro
                                    10
Gln Gln Pro Gln
           20
<210>
        484
<211>
       20
<212>
       \cdotPRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Gln Phe Pro
Gln Pro Gln Gln
<210>
       485
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 485
Gln Gln Pro Gln Gln Gln Pro Gln Pro Gln Gln Pro Gln Gln Pro
Phe Pro Gln Pro
           20
<210>
       486
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
```

```
<400> 486
Gln Pro Gln Gln Pro Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln
    5
                      10
Leu Pro Phe Pro
        20
<210>
      487
<211>
       20
<212>
      PRT
<213>
     Artificial Sequence
<220>
<223> peptide
<400> 487
Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Tyr Pro Gln Gln Pro
                                 10
Gln Gln Pro Phe
          20
<210>
       488
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
     peptide
<400> 488
Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln
Gln Pro Gln Gln
          20
<210>
      489
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 489
Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Thr Tyr Pro Gln Arg Pro
                                 10
Gln Gln Pro Phe
          20
<210>
       490
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
```

```
<400> 490
Arg Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Tyr Pro Gln Gln Pro
     5
Gln Gln Pro Phe
           20
       491
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       491
Gln Gln Pro Phe Pro Gln Pro Gln Bro Gln Leu Pro Phe Pro Gln
                                   10
Gln Pro Gln Gln
           20
<210>
       492
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Pro Phe Pro Gln Pro Gln Gln Ala Gln Leu Pro Phe Pro Gln
Gln Pro Gln Gln
           20
<210>
       493
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       493
Gln Gln Thr Phe Pro Gln Gln Pro Gln Leu Pro Phe Pro Gln Gln Pro
                                   10
                                                       15
Gln Gln Pro Phe
           20
<210>
       494
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       494
```

```
Gln Gln Pro Tyr Pro Gln Gln Pro Gln Pro Phe Pro Gln Thr Gln
                                   10
Gln Pro Gln Gln
          20
       495
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      495
Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln
                                   10
Gln Pro Gln Gln
           20
<210>
       496
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       496
Gln Gln Thr Tyr Pro Gln Arg Pro Gln Gln Pro Phe Pro Gln Thr Gln
                                    10
Gln Pro Gln Gln
<210>
       497.
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
      497
Gln Pro Gln Leu Pro Phe Pro Gln Gln Pro Gln Gln Pro Gln Gln
                                   10
Pro Phe Pro Gln
           20
<210>
       498
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       498
Gln Ala Gln Leu Pro Phe Pro Gln Gln Pro Gln Gln Pro Leu Pro Gln
```

```
1
                                    10
                                                         15
Pro Gln Gln Pro
            20
        499
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400> 499
Gln Leu Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln
                                     10
Gln Pro Gln Gln
            20
<210>
        500
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        500
Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln
Thr Gln Gln Pro
            20
<210>
        501
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe
                                    10
                5
Pro Gln Gln Pro
            20
<210>
        502
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        502
Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe
                                    10
```

```
Pro Gln Thr Gln
           20
<210>
        503
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
      peptide
<400> 503
Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln
                                    10
Pro Phe Pro Gln
           20
<210>
        504
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
      peptide
        504
Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Leu Phe Pro Gln
                                    10
Ser Gln Gln Pro
           20
<210>
        505
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400> 505
Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln
Leu Gln Gln Pro
           20
<210>
       506
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
       506
Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln
               5
                                   10
                                                        15
```

```
Ser Gln Gln Pro
            20
        507
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        507
Gln Gln Pro Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln
Ser Lys Gln Pro
            20
<210>
        508
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        508
Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln
                                     10
Leu Gln Gln Pro
            20
<210>
        509
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        509
Gln Gln Pro Leu Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln
                5
Ser Gln Gln Pro
            20
<210>
        510
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln
                5
                                     10
```

```
Ser Gln Gln Pro
            20
<210>
        511
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        511
Gln Pro Gln Gln Leu Phe Pro Gln Ser Gln Gln Pro Gln Gln Gln Phe
                                     10
Ser Gln Pro Gln
            20
<210>
        512
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Pro Gln Gln Pro Phe Pro Gln Leu Gln Gln Pro Gln Gln Pro Phe
                5
                                     10
Pro Gln Pro Gln
            20
<210>
        513
<211>
        20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
        peptide
<400>
        513
Gln Pro Gln Gln Pro Phe Pro Gln Ser Gln Gln Pro Gln Gln Pro Phe
                                     10
Pro Gln Pro Gln
            20
<210>
       514
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Pro Gln Gln Pro Phe Pro Gln Ser Lys Gln Pro Gln Gln Pro Phe
                5
                                    10
```

```
Pro Gln Pro Gln
            20
<210>
        515
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Pro Gln Gln Pro Phe Pro Gln Leu Gln Gln Pro Gln Gln Pro Leu
Pro Gln Pro Gln
            20
<210>
        516
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        516
Ser Gln Gln Pro Gln Gln Gln Phe Ser Gln Pro Gln Gln Gln Phe Pro
Gln Pro Gln Gln
            20
<210>
        517
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        517
Leu Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Gln Leu Pro
                5
                                     10
Gln Pro Gln Gln
            20
<210>
        518
<211>
       20
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ser Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Gln Phe Pro
                                     10
Gln Pro Gln Gln
```

20

```
<210>
        519
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        519
Ser Lys Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Gln
Ser Phe Pro Gln
            20
<210>
        520
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        520
Leu Gln Gln Pro Gln Gln Pro Leu Pro Gln Pro Gln Gln Pro Gln Gln
                                     10
Pro Phe Pro Gln
            20
<210>
        521
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Ser Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Gln
                5
                                     10
Ser Phe Pro Gln
            20
<210>
        522
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ser Gln Pro Gln Gln Gln Phe Pro Gln Pro Gln Gln Pro Gln Ser
                                     10
Phe Pro Gln Gln
```

20

```
<210>
       523
<211>
       20
       PRT
<212>
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
       523
Pro Gln Pro Gln Gln Gln Leu Pro Gln Pro Gln Pro Gln Ser
                                 10
Phe Pro Gln Gln
           20
       524
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Pro Gln Pro Gln Gln Gln Pro Gln Pro Gln Gln Pro Gln Ser
                                  10
Phe Pro Gln Gln
           20
<210>
       525
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 525
Pro Gln Pro Gln Gln Gln Ser Phe Pro Gln Gln Gln Pro Ser
Leu Ile Gln Gln
           20
<210>
       526
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Gln Pro
              5
                                  10
Leu Ile Gln Pro
           20
```

```
527
<210>
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       527
Pro Gln Pro Gln Gln Pro Gln Ser Phe Pro Gln Gln Gln Pro
                                   10
Leu Ile Gln Pro
           20
<210>
       528
<211>
       20
       PRT
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400> 528
Gln Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln Pro Pro Phe
Ile Gln Pro Ser
           20
<210>
       529
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
Gln Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln Gln Arg Pro Phe
Ile Gln Pro Ser
<210>
       530
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       530
Gln Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln Gln Pro Ser Leu
                                   10
Ile Gln Gln Ser
           20
```

```
<210> 531
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
<400> 531
Phe Pro Gln Gln Pro Pro Phe Ile Gln Pro Ser Leu Gln Gln Gln
                           10
Val Asn Pro Cys
           20
<210>
       532
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 532
Phe Pro Gln Gln Gln Arg Pro Phe Ile Gln Pro Ser Leu Gln Gln Gln
                                  10
Leu Asn Pro Cys
           20
<210>
       533
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 533
Phe Pro Gln Gln Pro Ser Leu Ile Gln Gln Ser Leu Gln Gln
Leu Asn Pro Cys
<210>
       534
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Phe Pro Gln Gln Gln Pro Leu Ile Gln Pro Tyr Leu Gln Gln Gln
                                  10
Met Asn Pro Cys
<210> 535
```

```
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 535
Phe Pro Gln Gln Gln Pro Ala Ile Gln Ser Phe Leu Gln Gln
                                  10
Met Asn Pro Cys
 20
<210>
       536
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 536
Ile Gln Pro Ser Leu Gln Gln Gln Val Asn Pro Cys Lys Asn Phe Leu
                                   10
Leu Gln Gln Cys
           20
       537
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Ile Gln Pro Ser Leu Gln Gln Gln Leu Asn Pro Cys Lys Asn Ile Leu
Leu Gln Gln Ser
<210>
       538
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 538
Ile Gln Gln Ser Leu Gln Gln Gln Leu Asn Pro Cys Lys Asn Phe Leu
Leu Gln Gln Cys
           20
<210>
       539
       20
<211>
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 539
Ile Gln Pro Tyr Leu Gln Gln Gln Met Asn Pro Cys Lys Asn Tyr Leu
                                 10
Leu Gln Gln Cys
 20
<210>
       540
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
Ile Gln Ser Phe Leu Gln Gln Met Asn Pro Cys Lys Asn Phe Leu
Leu Gln Gln Cys
<210>
      541
      20
PRT
<211>
<212>
<213> Artificial Sequence
<220>
<223> peptide
<400> 541
Val Asn Pro Cys Lys Asn Phe Leu Leu Gln Gln Cys Lys Pro Val Ser
Leu Val Ser Ser
           20
<210> 542
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
      542
Leu Asn Pro Cys Lys Asn Ile Leu Leu Gln Gln Ser Lys Pro Ala Ser
       5
Leu Val Ser Ser
           20
<210> 543
```

```
<211> 20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Asn Pro Cys Lys Asn Phe Leu Leu Gln Gln Cys Lys Pro Val Ser
Leu Val Ser Ser
           20
<210>
      544
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 544
Met Asn Pro Cys Lys Asn Tyr Leu Leu Gln Gln Cys Asn Pro Val Ser
Leu Val Ser Ser
           20
<210> 545
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 545
Met Asn Pro Cys Lys Asn Phe Leu Leu Gln Gln Cys Asn His Val Ser
Leu Val Ser Ser
       20
<210>
      546
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 546
Leu Gln Gln Cys Lys Pro Val Ser Leu Val Ser Ser Leu Trp Ser Met
Ile Trp Pro Gln
          20
<210>
      547
<211> 20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
Leu Gln Gln Ser Lys Pro Ala Ser Leu Val Ser Ser Leu Trp Ser Ile
Ile Trp Pro Gln
           20
<210>
       548
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       548
Leu Gln Gln Cys Lys Pro Val Ser Leu Val Ser Ser Leu Trp Ser Met
Ile Leu Pro Arg
        20
<210>
      549
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 549
Leu Gln Gln Cys Asn Pro Val Ser Leu Val Ser Ser Leu Val Ser Met
                                   10
Ile Leu Pro Arg
         20
<210>
      550
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Leu Gln Gln Cys Asn His Val Ser Leu Val Ser Ser Leu Val Ser Ile
             5
                                   10
Ile Leu Pro Arg
           20
       551
<210>
<211>
       20
<212>
      PRT
```

```
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 551
Leu Val Ser Ser Leu Trp Ser Met Ile Trp Pro Gln Ser Asp Cys Gln
                                   10
Val Met Arg Gln
            20
<210>
        552
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
        552
Leu Val Ser Ser Leu Trp Ser Ile Ile Trp Pro Gln Ser Asp Cys Gln
Val Met Arg Gln
            20
<210>
       553
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 553
Leu Val Ser Ser Leu Trp Ser Met Ile Leu Pro Arg Ser Asp Cys Gln
                                   10
Val Met Arg Gln
           20
<210>
      554
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       554
Leu Val Ser Ser Leu Trp Ser Ile Ile Leu Pro Pro Ser Asp Cys Gln
               5
                                   10
                                                       15
Val Met Arg Gln
           20
<210>
       555
<211>
      20
<212> PRT
```

```
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 555
Leu Val Ser Ser Leu Val Ser Met Ile Leu Pro Arg Ser Asp Cys Lys
                                   10
Val Met Arg Gln
           20
<210>
        556
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       556
Leu Val Ser Ser Leu Val Ser Met Ile Leu Pro Arg Ser Asp Cys Gln
                                  10
Val Met Gln Gln
           20
      557
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Leu Val Ser Ser Leu Val Ser Ile Ile Leu Pro Arg Ser Asp Cys Gln
Val Met Gln Gln
           20
<210>
       558
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 558
Ile Trp Pro Gln Ser Asp Cys Gln Val Met Arg Gln Gln Cys Cys Gln
                                   10
Gln Leu Ala Gln
           20
      559
<210>
<211>
      20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223>
      peptide
<400> 559
Ile Leu Pro Arg Ser Asp Cys Gln Val Met Arg Gln Gln Cys Cys Gln
                                   10
Gln Leu Ala Gln
           20
<210>
       560
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
Ile Leu Pro Pro Ser Asp Cys Gln Val Met Arg Gln Gln Cys Cys Gln
Gln Leu Ala Gln
           20
<210>
       561
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       561
Ile Leu Pro Arg Ser Asp Cys Lys Val Met Arg Gln Gln Cys Cys Gln
Gln Leu Ala Arg
           20
<210>
      562
<211>
      20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
      peptide
<400>
Ile Leu Pro Arg Ser Asp Cys Gln Val Met Gln Gln Gln Cys Cys Gln
Gln Leu Ala Gln
           20
<210>
      563
<211>
       20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223>
      peptide
<400>
       563
Val Met Arg Gln Gln Cys Cys Gln Gln Leu Ala Gln Ile Pro Gln Gln
Leu Gln Cys Ala
           20
<210>
       564
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       564
Val Met Arg Gln Gln Cys Cys Gln Gln Leu Ala Arg Ile Pro Gln Gln
Leu Gln Cys Ala
           20
      565
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Val Met Gln Gln Cys Cys Gln Gln Leu Ala Gln Ile Pro Arg Gln
Leu Gln Cys Ala
           20
<210> \ 566
<211> 20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
        566
Val Met Gln Gln Cys Cys Gln Gln Leu Ala Gln Ile Pro Gln Gln
Leu Gln Cys Ala
            20
        567
<210>
<211>
        20
       PRT
<212>
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 567
Gln Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Thr
1 5
                                 10
Ile Ile His Ser
           20
<210>
       568
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Thr
Val Ile His Ser
           20
<210>
       569
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       569
Gln Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser
                                  10
Val Val His Ser
           20
<210>
      570
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       570
Gln Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser
              5
                                  10
Ile Val His Ser
           20
<210>
      571
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
```

```
<223> peptide
<400>
Gln Leu Ala Arg Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Gly
                                   10
Ile Val His Ser
           20
<210>
        572
       20 `
<211>
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
      peptide
Gln Leu Ala Gln Ile Pro Arg Gln Leu Gln Cys Ala Ala Ile His Ser
Val Val His Ser
           20
<210>
        573
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       573
Gln Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser
Val Ala His Ser
           20
      574
<210>
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400>
Leu Gln Cys Ala Ala Ile His Thr Ile Ile His Ser Ile Ile Met Gln
               5
                                   10
                                                       15
Gln Glu Gln Gln
           20
       575
<210>
<211>
        20
<212>
      PRT
<213> Artificial Sequence
```

```
<220>
<223>
      peptide
<400> 575
Leu Gln Cys Ala Ala Ile His Thr Val Ile His Ser Ile Ile Met Gln
                                    10
Gln Glu Gln Gln
           20
<210>
        576
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       576
Leu Gln Cys Ala Ala Ile His Ser Val Val His Ser Ile Ile Met Gln
                                    10
Gln Gln Gln
           20
<210>
        577
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Leu Gln Cys Ala Ala Ile His Ser Ile Val His Ser Ile Ile Met Gln
                                    10
Gln Glu Gln Gln
<210>
       578
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       578
Leu Gln Cys Ala Ala Ile His Ser Val Val His Ser Ile Ile Met Gln
                                   10
Gln Glu Gln Gln
           20
<210>
       579
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 579
Leu Gln Cys Ala Ala Ile His Gly Ile Val His Ser Ile Ile Met Gln
                      10
Gln Glu Gln Gln
          20
       580
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
<400> 580
Leu Gln Cys Ala Ala Ile His Ser Val Ala His Ser Ile Ile Met Gln
                                  10
Gln Glu Gln Gln
           20
<210>
       581
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       581
Ile Ile His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Gln Gln
Gly Met His Ile
       20
<210>
      582
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400>
Val Ile His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Gly Met His
       5
Ile Leu Leu Pro
          20
<210>
      583
<211>
      20
<212>
     PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
Val Val His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Gln Gln
                                    10
Gln Gly Ile Asp
           20
<210>
        584
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        584
Ile Val His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Arg Gln
Gly Val Gln Ile
            20
<210>
        585
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        585
Val Val His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Leu Gln
Gly Val Gln Ile
           20
<210>
       586
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        586
Ile Val His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Gln Gln Gln
               5
                                   10
                                                       15
Gln Gln Gln Gln
           20
<210>
       587
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
```

```
Val Val His Ser Ile Val Met Gln Gln Gln Gln Gln Gln Gly Ile Gln
Ile Leu Arg Pro
          20
<210>
       588
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       588
Val Ala His Ser Ile Ile Met Gln Gln Gln Gln Gln Gln Val Pro
        5
Ile Leu Arg Pro
           20
<210>
       589
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Glu Gln Gln Gln Gln Gln His Ile Leu Leu Pro Leu
Tyr Gln Gln Gln
<210>
       590
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       590
Gln Gln Gln Gln Gln Gln Gln Gly Ile Asp Ile Phe Leu Pro
Leu Ser Gln His
           20
<210>
       591
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
```

```
<400> 591
Gln Gln Gln Gln Gln Gln Gln Gln Gly Met His Ile Phe Leu Pro
                                10
Leu Ser Gln Gln
          20
       592
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Gln Glu Gln Glu Gln Arg Gln Gly Val Gln Ile Leu Val Pro Leu
                                10
Ser Gln Gln Gln
          20
<210>
       593
<211>
       20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
      peptide
<400>
       593
Gln Glu Gln Glu Gln Leu Gln Gly Val Gln Ile Leu Val Pro Leu
Ser Gln Gln Gln
          20
<210>
       594
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>, 594
Ile Gln Ile Met
          20
       595
<210>
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       595
```

```
Gln Glu Gln Gln Gly Ile Gln Ile Leu Arg Pro Leu Phe Gln Leu
                                    10
Val Gln Gly Gln
            20
<210>
        596
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        596
Gln Glu Gln Gln Gly Val Pro Ile Leu Arg Pro Leu Phe Gln Leu
Ala Gln Gly Leu
            20
<210>
        597
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
Gln Gln Gln Gln Gln Gln Gly Ile Gln Ile Met Arg Pro Leu Phe
Gln Leu Val Gln
            20
<210>
        598
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        598
Gly Met His Ile Leu Leu Pro Leu Tyr Gln Gln Gln Val Gly Gln
                                    10
Gly Thr Leu Val
            20
       599
<210>
       20
<211>
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        599
Gly Ile Asp Ile Phe Leu Pro Leu Ser Gln His Glu Gln Val Gly Gln
```

```
10
                                                         15
1
Gly Ser Leu Val
            20
<210>
        600
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        600
Gly Met His Ile Phe Leu Pro Leu Ser Gln Gln Gln Val Gly Gln
                                    10
Gly Ser Leu Val
            20
<210>
        601
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        601
Gly Val Gln Ile Leu Val Pro Leu Ser Gln Gln Gln Gln Val Gly Gln
Gly Thr Leu Val
            20
<210>
        602
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gly Val Gln Ile Leu Val Pro Leu Ser Gln Gln Gln Gln Val Gly Gln
                                                         15
Gly Ile Leu Val
           20
        603
<210>
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gly Ile Gln Ile Met Arg Pro Leu Phe Gln Leu Val Gln Gly Gln Gly
```

```
1
                                    10
                                                         15
Ile Ile Gln Pro
            20
<210>
        604
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        604
Gly Ile Gln Ile Leu Arg Pro Leu Phe Gln Leu Val Gln Gly Gln Gly
                                     10
Ile Ile Gln Pro
            20
<210>
        605
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gly Val Pro Ile Leu Arg Pro Leu Phe Gln Leu Ala Gln Gly Leu Gly
Ile Ile Gln Pro
            20
<210>
        606
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        606
Tyr Gln Gln Gln Val Gly Gln Gly Thr Leu Val Gln Gly Gln Gly
                                    10
Ile Ile Gln Pro
           20
<210>
        607
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        607
Ser Gln His Glu Gln Val Gly Gln Gly Ser Leu Val Gln Gly Gln Gly
```

```
10
                                                        15
1
Ile Ile Gln Pro
            20
<210>
        608
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Ser Gln Gln Gln Val Gly Gln Gly Ser Leu Val Gln Gly Gln Gly
                                    10
Ile Ile Gln Pro
            20
<210>
        609
       20
<211>
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
        609
Ser Gln Gln Gln Val Gly Gln Gly Thr Leu Val Gln Gly Gln Gly
Ile Ile Gln Pro
            20
       610
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ser Gln Gln Gln Val Gly Gln Gly Ile Leu Val Gln Gly Gln Gly
Ile Ile Gln Pro
           20
<210>
       611
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       611
Gly Thr Leu Val Gln Gly Gln Gly Ile Ile Gln Pro Gln Gln Pro Ala
                                    10
```

```
Gln Leu Glu Ala
            20
<210>
        612
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        612
Gly Ser Leu Val Gln Gly Gln Gly Ile Ile Gln Pro Gln Gln Pro Ala
                                    10
Gln Leu Glu Ala
            20
<210>
        613
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Phe Gln Leu Val Gln Gly Gln Gly Ile Ile Gln Pro Gln Gln Pro Ala
Gln Leu Glu Val
            20
<210>
        614
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400> 614
Phe Gln Leu Ala Gln Gly Leu Gly Ile Ile Gln Pro Gln Gln Pro Ala
Gln Leu Glu Gly
           20
<210>
       615
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu Ala Ile Arg Ser Leu
               5
                                    10
                                                         15
```

```
Val Leu Gln Thr
            20
<210>
        616
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
<400>
Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu Val Ile Arg Ser Leu
                                    10
Val Leu Gln Thr
            20
<210>
        617
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu Val Ile Arg Ser Ser
Val Leu Gln Thr
            20
<210>
        618
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 618
Ile Ile Gln Pro Gln Gln Pro Ala Gln Tyr Glu Val Ile Arg Ser Leu
                                    10
Val Leu Arg Thr
           20
<210>
       619
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       619
Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu Gly Ile Arg Ser Leu
               5
                                    10
```

```
Val Leu Lys Thr
           20
        620
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Leu Glu Ala Ile Arg Ser Leu Val Leu Gln Thr Leu Pro Thr Met
Cys Asn Val Tyr
<210>
        621
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400>
        621
Gln Leu Glu Ala Ile Arg Ser Leu Val Leu Gln Thr Leu Pro Ser Met
Cys Asn Val Tyr
            20
<210>
        622
        20
<211>
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
Gln Leu Glu Val Ile Arg Ser Leu Val Leu Gln Thr Leu Ala Thr Met
                                    10
Cys Asn Val Tyr
<210>
        623
<211>
       20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Leu Glu Val Ile Arg Ser Ser Val Leu Gln Thr Leu Ala Thr Met
                                    10
Cys Asn Val Tyr
```

20

```
<210>
        624
<211>
        20
        PRT
<212>
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        624
Gln Leu Glu Val Ile Arg Ser Leu Val Leu Gly Thr Leu Pro Thr Met
Cys Asn Val Phe
            20
<210>
        625
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Tyr Glu Val Ile Arg Ser Leu Val Leu Arg Thr Leu Pro Asn Met
Cys Asn Val Tyr
<210>
       626
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
      626
Gln Leu Glu Gly Ile Arg Ser Leu Val Leu Lys Thr Leu Pro Thr Met
Cys Asn Val Tyr
            20
<210>
      627
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
Val Leu Gln Thr Leu Pro Thr Met Cys Asn Val Tyr Val Pro Pro Glu
               5
Cys Ser Ile Ile
            20
```

```
<210>
        628
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Val Leu Gln Thr Leu Pro Ser Met Cys Asn Val Tyr Val Pro Pro Glu
                                   10
Cys Ser Ile Met
           20
<210>
       629
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
        629
Val Leu Gln Thr Leu Ala Thr Met Cys Asn Val Tyr Val Pro Pro Tyr
Cys Ser Thr Ile
           20
<210>
       630
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       630
Val Leu Gly Thr Leu Pro Thr Met Cys Asn Val Phe Val Pro Pro Glu
                                   10
Cys Ser Thr Thr
           20
<210>
       631
<211>
      20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 631
Val Leu Arg Thr Leu Pro Asn Met Cys Asn Val Tyr Val Arg Pro Asp
                                   10
Cys Ser Thr Ile
           20
```

```
<210> 632
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 632
Val Leu Lys Thr Leu Pro Thr Met Cys Asn Val Tyr Val Pro Pro Asp
                                  10
Cys Ser Thr Ile
           20
<210>
      633
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400> 633
Cys Asn Val Tyr Val Pro Pro Glu Cys Ser Ile Ile Lys Ala Pro Phe
Ser Ser Val Val
          20
      634
<210>
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 634
Cys Asn Val Tyr Val Pro Pro Glu Cys Ser Ile Met Arg Ala Pro Phe
                                 10
Ala Ser Ile Val
          20
<210> 635
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 635
Cys Asn Val Tyr Val Pro Pro Tyr Cys Ser Thr Ile Arg Ala Pro Phe
                                  10
Ala Ser Ile Val
           20
```

```
<210> 636
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 636
Cys Asn Val Phe Val Pro Pro Glu Cys Ser Thr Thr Lys Ala Pro Phe
                                  10
Ala Ser Ile Val
        20
<210>
       637
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400>
       637
Cys Asn Val Tyr Val Arg Pro Asp Cys Ser Thr Ile Asn Ala Pro Phe
Ala Ser Ile Val
           20
<210>
       638
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 638
Cys Asn Val Tyr Val Pro Pro Asp Cys Ser Thr Ile Asn Val Pro Tyr
Ala Asn Ile Asp
           20
<210>
      639
<211>
      18
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 639
Cys Ser Ile Ile Lys Ala Pro Phe Ser Ser Val Val Ala Gly Ile Gly
                                  10
Gly Gln
```

```
640
<210>
<211>
        18
<212>
        PRT
<213>
      Artificial Sequence
<220>
<223>
        peptide
<400>
        640
Cys Ser Ile Met Arg Ala Pro Phe Ala Ser Ile Val Ala Gly Ile Gly
Gly Gln
<210>
        641
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
        641
Cys Ser Thr Ile Arg Ala Pro Phe Ala Ser Ile Val Ala Gly Ile Gly
Gly Gln Tyr Arg
           20
<210>
        642
<211>
       18
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      642
Cys Ser Thr Ile Arg Ala Pro Phe Ala Ser Ile Val Ala Ser Ile Gly
                                    10
Gly Gln
<210>
      643
<211>
       18
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Cys Ser Thr Thr Lys Ala Pro Phe Ala Ser Ile Val Ala Asp Ile Gly
               5
Gly Gln
<210>
       644
```

```
18
<211>
       PRT
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        644
Cys Ser Thr Ile Asn Ala Pro Phe Ala Ser Ile Val Ala Gly Ile Ser
                                    10
Gly Gln
<210>
        645
<211>
       18
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       645
Cys Ser Thr Ile Asn Val Pro Tyr Ala Asn Ile Asp Ala Gly Ile Gly
Gly Gln
<210>
       646
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
       646
Pro Gln Gln Pro Phe Pro Leu Gln Pro Gln Gln Ser Phe Leu Trp Gln
               5
                                    10
                                                        15
Ser Gln Gln Pro
           20
      647
<210>
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       647
Pro Gln Gln Ser Phe Leu Trp Gln Ser Gln Gln Pro Phe Leu Gln Gln
                                    10
Pro Gln Gln Pro
           20
<210>
       648
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 648
Ser Gln Gln Pro Phe Leu Gln Gln Pro Gln Gln Pro Ser Pro Gln Pro
     5
                                  10
Gln Gln Val Val
           20
<210>
       649
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Gln Pro Ser Pro Gln Pro Gln Val Val Gln Ile Ile Ser
                                   10
Pro Ala Thr Pro
           20
<210>
       650
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 650
Gln Gln Val Val Gln Ile Ile Ser Pro Ala Thr Pro Thr Thr Ile Pro
Ser Ala Gly Lys
           20
<210>
      651
<211>
      20
<212>
      PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400>
       651
Pro Ala Thr Pro Thr Thr Ile Pro Ser Ala Gly Lys Pro Thr Ser Ala
               5
                                  10
Pro Phe Pro Gln
           20
<210>
      652
<211>
      20
<212>
      PRT
```

```
<213> Artificial Sequence
<220>
<223>
       peptide
<400>
        652
Ser Ala Gly Lys Pro Thr Ser Ala Pro Phe Pro Gln Gln Gln Gln
                                   10
His Gln Gln Leu
           20
<210>
       653
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Phe Pro Gln Gln Gln Gln His Gln Gln Leu Ala Gln Gln Gln
Ile Pro Val Val
           20
<210>
       654
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 654
His Gln Gln Leu Ala Gln Gln Gln Ile Pro Val Val Gln Pro Ser Ile
Leu Gln Gln Leu
           20
<210>
      655
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       655
Ile Pro Val Val Gln Pro Ser Ile Leu Gln Gln Leu Asn Pro Cys Lys
               5
                                   10
                                                       15
Val Phe Leu Gln
           20
<210>
       656
<211>
       20
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223>
        peptide
<400>
Leu Gln Gln Leu Asn Pro Cys Lys Val Phe Leu Gln Gln Gln Cys Ser
                                   10
Pro Val Ala Met
           20
        657
<210>
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        657
Val Phe Leu Gln Gln Cys Ser Pro Val Ala Met Pro Gln Arg Leu
Ala Arg Ser Gln
           20
<210>
        658
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Val Ala Met Pro Gln Arg Leu Ala Arg Ser Gln Met Leu Gln Gln
Ser Ser Cys His
           20
<210>
      659
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 659
Ala Arg Ser Gln Met Leu Gln Gln Ser Ser Cys His Val Met Gln Gln
                                   10
Gln Cys Cys Gln
           20
<210>
       660
<211>
      20
<212>
       PRT
<213> Artificial Sequence
```

```
<220>
<223>
      peptide
<400> 660
Ser Ser Cys His Val Met Gln Gln Gln Cys Cys Gln Gln Leu Pro Gln
                                    10
Ile Pro Gln Gln
            20
<210>
        661
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Gln Cys Cys Gln Gln Leu Pro Gln Ile Pro Gln Gln Ser Arg Tyr Gln
                                   10
Ala Ile Arg Ala
           20
<210>
        662
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 662
Pro Gln Ile Pro Gln Gln Ser Arg Tyr Glu Ala Ile Arg Ala Ile Ile
Tyr Ser Ile Ile
           20
<210>
       663
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
Ile Pro Gln Gln Ser Arg Tyr Gln Ala Ile Arg Ala Ile Ile Tyr Ser
Ile Ile Leu Gln
<210>
      664
<211>
       20
<212>
       PRT
<213> Artificial Sequence
```

```
<220>
<223>
       peptide
<400> 664
Ala Ile Arg Ala Ile Ile Tyr Ser Ile Ile Leu Gln Glu Gln Gln
                                    10
Val Gln Gly Ser
           20
<210>
        665
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        665
Ile Ile Leu Gln Glu Gln Gln Val Gln Gly Ser Ile Gln Ser Gln
Gln Gln Gln Pro
<210>
        666
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        666
Val Gln Gly Ser Ile Gln Ser Gln Gln Gln Pro Gln Gln Leu Gly
Gln Cys Val Ser
           20
<210>
        667
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
        667
Gln Gln Gln Pro Gln Gln Leu Gly Gln Cys Val Ser Gln Pro Gln Gln
                                    10
Gln Ser Gln Gln
           20
<210>
        668
<211>
       20
       PRT
<212>
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 668
Gln Cys Val Ser Gln Pro Gln Gln Gln Ser Gln Gln Gln Leu Gly Gln
       5
Gln Pro Gln Gln
           20
       669
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       669
Gln Ser Gln Gln Gln Leu Gly Gln Gln Pro Gln Gln Gln Leu Ala
                                   10
Gln Gly Thr Phe
           20
<210>
       670
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       670
Gln Pro Gln Gln Gln Leu Ala Gln Gly Thr Phe Leu Gln Pro His
Gln Ile Ala Gln
           20
<210>
       671
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400> 671
Gln Gly Thr Phe Leu Gln Pro His Gln Ile Ala Gln Leu Glu Val Met
                                  10
Thr Ser Ile Ala
           20
      672
<210>
<211>
       20
<212>
       PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide
<400> 672
Gln Ile Ala Gln Leu Glu Val Met Thr Ser Ile Ala Leu Arg Ile Leu
                                  10
Pro Thr Met Cys
       20
<210>
       673
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 673
Thr Ser Ile Ala Leu Arg Ile Leu Pro Thr Met Cys Ser Val Asn Val
                                   10
Pro Leu Tyr Arg
           20
<210>
       674
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Thr Met Cys Ser Val Asn Val Pro Leu Tyr Arg Thr Thr Ser
Val Pro Phe Gly
           20
<210>
       675
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 675
Pro Leu Tyr Arg Thr Thr Thr Ser Val Pro Phe Gly Val Gly Thr Gly
Val Gly Ala Tyr
           20
<210>
       676
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
```

```
<223> peptide
<400> 676
Thr Ile Thr Arg Thr Phe Pro Ile Pro Thr Ile Ser Ser Asn Asn
                                  10
His His Phe Arg
          20
<210>
       677
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Pro Thr Ile Ser Ser Asn Asn His His Phe Arg Ser Asn Ser Asn
                                  10
His His Phe His
           20
<210>
       678
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400>
       678
His His Phe Arg Ser Asn Ser Asn His His Phe His Ser Asn Asn Asn
Gln Phe Tyr Arg
           20
      679
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
       679
His His Phe His Ser Asn Asn Asn Gln Phe Tyr Arg Asn Asn Ser
              5
                                  10
Pro Gly His Asn
           20
<210>
       680
      20
<211>
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
Gln Phe Tyr Arg Asn Asn Asn Ser Pro Gly His Asn Asn Pro Leu Asn
                                   10
Asn Asn Asn Ser
           20
<210>
        681
<211>
        20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400> 681
Pro Gly His Asn Asn Pro Leu Asn Asn Asn Ser Pro Asn Asn Asn
Ser Pro Ser Asn
           20
<210>
       682
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Asn Asn Asn Ser Pro Asn Asn Asn Ser Pro Ser Asn His His Asn Asn
Ser Pro Asn Asn
<210>
      683
      20
<211>
      PRT
<212>
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 683
Ser Pro Ser Asn His His Asn Asn Ser Pro Asn Asn Asn Phe Gln Tyr
                                   10
His Thr His Pro
           20
      684
<210>
<211>
      20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
```

```
<400> 684
Ser Pro Asn Asn Asn Phe Gln Tyr His Thr His Pro Ser Asn His Lys
Asn Leu Pro His
           20
<210>
       685
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       685
His Thr His Pro Ser Asn His Lys Asn Leu Pro His Thr Asn Asn Ile
                                   10
Gln Gln Gln
           20
<210>
       686
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Asn Leu Pro His Thr Asn Asn Ile Gln Gln Gln Pro Pro Phe Ser
Gln Gln Gln
<210>
       687
<211>
       20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       687
Gln Gln Gln Pro Pro Phe Ser Gln Gln Gln Pro Pro Phe Ser
                                   10
Gln Gln Gln
           20
<210>
       688
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
```

```
<400> 688
Gln Gln Gln Gln Pro Pro Phe Ser Gln Gln Gln Pro Val Leu Pro
     5
                                  10
Gln Gln Ser Pro
           20
<210>
       689
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Gln Gln Pro Val Leu Pro Gln Gln Ser Pro Phe Ser Gln Gln
Gln Gln Leu Val
<210>
       690
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       690
Gln Gln Ser Pro Phe Ser Gln Gln Gln Leu Val Leu Pro Pro Gln
Gln Gln Gln
           20
<210>
       691
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Leu Val Leu Pro Pro Gln Gln Gln Gln Gln Leu Val Gln
               5
                                  10
                                                      15
Gln Gln Ile Pro
           20
       692
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
       692
```

```
Gln Gln Gln Gln Leu Val Gln Gln Gln Ile Pro Ile Val Gln Pro
                                    10
Ser Val Leu Gln
           20
<210>
        693
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        693
Gln Gln Ile Pro Ile Val Gln Pro Ser Val Leu Gln Gln Leu Asn Pro
                                    10
Cys Lys Val Phe
           20
<210>
       694
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       694
Ser Val Leu Gln Gln Leu Asn Pro Cys Lys Val Phe Leu Gln Gln Gln
Cys Ser Pro Val
           20
<210>
       695
<211>
       20
       PRT
<212>
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      695
Cys Lys Val Phe Leu Gln Gln Gys Ser Pro Val Ala Met Pro Gln
Arg Leu Ala Arg
           20
<210>
       696
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       696
Cys Ser Pro Val Ala Met Pro Gln Arg Leu Ala Arg Ser Gln Met Trp
```

```
15
                                  10
1
Gln Gln Ser Ser
           20
<210>
      697
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 697
Arg Leu Ala Arg Ser Gln Met Trp Gln Gln Ser Ser Cys His Val Met
Gln Gln Gln Cys
<210>
       698
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 698
Gln Gln Ser Ser Cys His Val Met Gln Gln Gln Cys Cys Gln Gln Leu
Gln Gln Ile Pro
           20
<210>
       699
<211>
       20
       PRT
<212>
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Gln Gln Gln Cys Cys Gln Gln Leu Gln Gln Ile Pro Glu Gln Ser Arg
Tyr Glu Ala Ile
          20
<210>
       700
<211>
       20
<212>
       PRT
      Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       700
Gln Gln Ile Pro Glu Gln Ser Arg Tyr Glu Ala Ile Arg Ala Ile Ile
                                   10
```

```
Tyr Ser Ile Ile
            20
<210>
        701
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
        701
<400>
Tyr Glu Ala Ile Arg Ala Ile Ile Tyr Ser Ile Ile Leu Gln Glu Gln
                                     10
Gln Gln Gly Phe
            20
<210>
        702
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Tyr Ser Ile Ile Leu Gln Glu Gln Gln Gly Phe Val Gln Pro Gln
Gln Gln Gln Pro
            20
<210>
        703
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        703
Gln Gln Gly Phe Val Gln Pro Gln Gln Gln Pro Gln Gln Ser Gly
                5
                                     10
                                                         15
Gln Gly Val Ser
            20
<210>
        704
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Gln Gln Pro Gln Gln Ser Gly Gln Gly Val Ser Gln Ser Gln Gln
```

```
15
                                    10
1
Gln Ser Gln Gln
            20
        705
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
Gln Gly Val Ser Gln Ser Gln Gln Gln Ser Gln Gln Leu Gly Gln
Cys Ser Phe Gln
<210>
        706
<211>
        20
       PRT
<212>
       Artificial Sequence
<213>
<220>
<223>
        peptide
<400>
        706
Gln Ser Gln Gln Gln Leu Gly Gln Cys Ser Phe Gln Gln Pro Gln Gln
Gln Leu Gly Gln
            20
<210>
        707
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
        peptide
<400>
        707
Cys Ser Phe Gln Gln Pro Gln Gln Gln Leu Gly Gln Gln Pro Gln Gln
Gln Gln Gln Gln
            20
<210>
        708
<211>
        20
<212>
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
Gln Leu Gly Gln Gln Pro Gln Gln Gln Gln Gln Gln Gln Val Leu Gln
```

```
Gly Thr Phe Leu
           20
<210>
        709
<211>
        20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
      709
<400>
Gln Gln Gln Gln Val Leu Gln Gly Thr Phe Leu Gln Pro His Gln
                                    10
Ile Ala His Leu
           20
<210>
       710
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
      peptide
<400>
       710
Gly Thr Phe Leu Gln Pro His Gln Ile Ala His Leu Glu Ala Val Thr
                                    10
Ser Ile Ala Leu
           20
<210>
       711
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       711
Ile Ala His Leu Glu Ala Val Thr Ser Ile Ala Leu Arg Thr Leu Pro
                                    10
Thr Met Cys Ser
           20
<210>
       712
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       712
Ser Ile Ala Leu Arg Thr Leu Pro Thr Met Cys Ser Val Asn Val Pro
                5
```

```
Leu Tyr Ser Ala
           20
<210>
       713
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Thr Met Cys Ser Val Asn Val Pro Leu Tyr Ser Ala Thr Thr Ser Val
                                    10
Pro Phe Gly Val
<210>
       714
<211>
       19
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400> 714
Leu Tyr Ser Ala Thr Thr Ser Val Pro Phe Gly Val Gly Thr Gly Val
Gly Ala Tyr
       715
<210>
<211>
       20
<212>
      PRT
      Artificial Sequence
<213>
<220>
<223>
       peptide
<400> 715
Ser Cys Ile Ser Gly Leu Glu Arg Pro Trp Gln Gln Pro Leu Pro
Pro Gln Gln Ser
           20
<210>
       716
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Trp Gln Gln Pro Leu Pro Pro Gln Gln Ser Phe Ser Gln Gln
               5
```

```
Pro Pro Phe Ser
           20
       717
<210>
        20
<211>
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Gln Ser Phe Ser Gln Gln Pro Pro Phe Ser Gln Gln Gln
                                   10
Gln Pro Leu Pro
           20
<210>
       718
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
      peptide
<400> 718
Pro Pro Phe Ser Gln Gln Gln Gln Pro Leu Pro Gln Gln Pro Ser
Phe Ser Gln Gln
           20
<210>
       719
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       719
Gln Pro Leu Pro Gln Gln Pro Ser Phe Ser Gln Gln Gln Pro Pro Phe
                                   10
Ser Gln Gln Gln
           20
<210>
       720
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       720
Phe Ser Gln Gln Gln Pro Pro Phe Ser Gln Gln Pro Ile Leu Ser
                                   10
Gln Gln Pro Pro
```

20

```
<210>
        721
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
        peptide
<400>
        721
Ser Gln Gln Gln Pro Ile Leu Ser Gln Gln Pro Pro Phe Ser Gln Gln
                                     10
Gln Gln Pro Val
            20
        722
<210>
<211>
        20
<212>
        PRT
<213>
        Artificial Sequence
<220>
<223>
       peptide
Ala Thr Ala Ala Arg Glu Leu Asn Pro Ser Asn Lys Glu Leu Gln Ser
Pro Gln Gln Ser
<210>
       723
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
      723
Pro Ser Asn Lys Glu Leu Gln Ser Pro Gln Gln Ser Phe Ser Tyr Gln
Gln Gln Pro Phe
            20
       724
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       724
Pro Gln Gln Ser Phe Ser Tyr Gln Gln Gln Pro Phe Pro Gln Gln Pro
               5
                                    10
                                                         15
Tyr Pro Gln Gln
            20
```

```
<210>
       725
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Gln Gln Pro Phe Pro Gln Gln Pro Tyr Pro Gln Gln Pro Tyr Pro Ser
                                   10
Gln Gln Pro Tyr
<210>
       726
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       726
Tyr Pro Gln Gln Pro Tyr Pro Ser Gln Gln Pro Tyr Pro Ser Gln Gln
Pro Phe Pro Thr
           20
<210>
      727
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       727
Gln Gln Pro Tyr Pro Ser Gln Gln Pro Phe Pro Thr Pro Gln Gln
               5
Phe Pro Glu Gln
           20
<210>
       728
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       728
Pro Phe Pro Thr Pro Gln Gln Phe Pro Glu Gln Ser Gln Gln Pro
                                                       15
               5
                                   10
Phe Thr Gln Pro
           20
```

```
<210>
       729
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400> 729
Phe Pro Glu Gln Ser Gln Gln Pro Phe Thr Gln Pro Gln Gln Pro Thr
                                 10
Pro Ile Gln Pro
          20
<210>
       730
<211> 20
<212>
      PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 730
Phe Thr Gln Pro Gln Gln Pro Thr Pro Ile Gln Pro Gln Gln Pro Phe
Pro Gln Gln Pro
           20
<210>
       731
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Pro Ile Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Gln
Gln Pro Phe Pro
        20
<210>
      732
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 732
Pro Gln Gln Pro Gln Gln Pro Gln Pro Phe Pro Gln Pro Gln Gln
                                  10
Pro Phe Pro Trp
           20
```

```
<210>
      733
<211>
       20
<212>
       PRT
       Artificial Sequence
<213>
<220>
<223>
       peptide
<400>
       733
Gln Pro Phe Pro Gln Pro Gln Gln Pro Phe Pro Trp Gln Pro Gln Gln
                                   10
Pro Phe Pro Gln
           20
<210>
       734
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
       734
Pro Phe Pro Trp Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln Gln Ser
Phe Pro Leu Gln
           20
<210>
       735
<211>
       20
<212>
      PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 735
Pro Phe Pro Gln Thr Gln Gln Ser Phe Pro Leu Gln Pro Gln Gln Pro
                                   10
Phe Pro Gln Gln
           20
<210>
      736
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       736
Phe Pro Leu Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro
       5
                                 10
                                                       15
Phe Pro Gln Pro
           20
<210> 737
```

```
20
<211>
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
Phe Pro Gln Gln Pro Gln Bro Phe Pro Gln Pro Gln Leu Pro Phe
                                    10
Pro Gln Gln Ser
            20
<210>
        738
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
        738
Phe Pro Gln Pro Gln Leu Pro Phe Pro Gln Gln Ser Glu Gln Ile Ile
Pro Gln Gln Leu
            20
<210>
        739
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
       739
Pro Gln Gln Ser Glu Gln Ile Ile Pro Gln Gln Leu Gln Gln Pro Phe
                                    10
                                                         15
Pro Leu Gln Pro
            20
       740
<210>
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
       740
Pro Gln Gln Leu Gln Gln Pro Phe Pro Leu Gln Pro Gln Gln Pro Phe
                                    10
Pro Gln Gln Pro
            20
<210>
        741
<211>
        20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
       peptide
<400> 741
Pro Leu Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe
                                    10
Pro Gln Pro Gln
            20
        742
<210>
<211>
        20
<212>
        PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Ile Pro
Val Gln Pro Gln
            20
<210>
        743
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       743
Pro Gln Pro Gln Gln Pro Ile Pro Val Gln Pro Gln Gln Ser Phe Pro
Gln Gln Ser Gln
           20
<210>
       744
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       744
Val Gln Pro Gln Gln Ser Phe Pro Gln Gln Ser Gln Gln Ser Gln Gln
                                                        15
               5
                                    10
Pro Phe Ala Gln
            20
<210>
       745
<211>
        20
<212>
       PRT
```

```
<213>
       Artificial Sequence
<220>
<223>
       peptide
Gln Gln Ser Gln Gln Ser Gln Gln Pro Phe Ala Gln Pro Gln Gln Leu
                                    10
Phe Pro Glu Leu
<210>
        746
<211>
        20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       746
Pro Phe Ala Gln Pro Gln Gln Leu Phe Pro Glu Leu Gln Gln Pro Ile
                                    10
Pro Gln Gln Pro
           20
       747
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       747
Phe Pro Glu Leu Gln Gln Pro Ile Pro Gln Gln Pro Gln Gln Pro Phe
               5
                                    10
Pro Leu Gln Pro
           20
<210>
       748
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223>
       peptide
<400>
Pro Gln Gln Pro Gln Gln Pro Phe Pro Leu Gln Pro Gln Gln Pro Phe
                                    10
Pro Gln Gln Pro
            20
<210>
       749
<211>
       20
```

```
<212> PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 749
Pro Leu Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe
                                   10
Pro Gln Gln Pro
           20
<210>
       750
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
      peptide
<400>
Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Ser Phe
                                   10
Pro Gln Gln Pro
           20
<210>
       751
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
      peptide
<223>
<400> 751
Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln Pro Gln Gln Pro Tyr
Pro Gln Gln Gln
           20
      752
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223>
       peptide
<400>
       752
Pro Gln Gln Pro Gln Gln Pro Tyr Pro Gln Gln Pro Tyr Gly Ser
        5
                                   10 .
Ser Leu Thr Ser
           20
<210>
       753
<211>
       16
<212>
       PRT
```

```
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 753
Pro Gln Gln Pro Tyr Gly Ser Ser Leu Thr Ser Ile Gly Gln
                                  10
<210>
       754
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 754
Ala Arg Gln Leu Asn Pro Ser Asp Gln Glu Leu Gln Ser Pro Gln Gln
                                  10
Leu Tyr Pro Gln
           20
       755
<210>
<211>
       20
<212>
       PRT
<213>
       Artificial Sequence
<220>
<223> peptide
Gln Glu Leu Gln Ser Pro Gln Gln Leu Tyr Pro Gln Gln Pro Tyr Pro
Gln Gln Pro Tyr
<210>
       756
<211>
       20
<212>
       PRT
<213> Artificial Sequence
<220>
<223>
      peptide
<400> 756
Ser Arg Leu Ser Pro Arg Gly Lys Glu Leu His Thr Pro Gln Glu
Gln Phe Pro Gln
           20
<210>
       757
<211>
       20
<212>
       PRT
<213>
      Artificial Sequence
<220>
```

```
<223> peptide
<400> 757
Lys Glu Leu His Thr Pro Gln Glu Gln Phe Pro Gln Gln Gln Gln Phe 1 5 10 15
1 5
Pro Gln Pro Gln
          20
<210>
       758
<211>
       16
<212>
       PRT
<213>
      Artificial Sequence
<220>
<223> peptide
<400> 758
Gln Phe Pro Gln Gln Gln Gln Phe Pro Gln Pro Gln Gln Phe Pro Gln
```